OP001 Defensive medicine in general practice - A qualitative study of Danish GPs' perceptions and lived experiences

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Background
Defensive medicine is commonly defined as the practice of diagnostic tests, treatments and procedures that are conducted primarily to protect the physician from liability rather than to improve the patient's diagnosis or well-being. Recent years have witnessed a progressive increase in the practice of defensive medicine, primarily documented within a US-American health care setting. In Danish general practice, documentation on the extent of defensive medicine is lacking. In order to obtain this, first a qualitative exploration of how the phenomenon is perceived and experienced by general practitioners (GPs) is carried out.

Objectives
To describe the phenomenon of defensive medicine as perceived and experienced by Danish GPs.

Methods
A phenomenological methodology was used through which subjective perceptions, experiences and meanings were investigated. Data were generated through three focus group interviews with 3-8 GPs per group (n = 14). An interview guide was followed comprising the following themes for discussion: 1. Understandings, 2. Experiences, 3. Motives, 4. Suggestions for change. The focus group interviews were recorded and transcribed verbatim. Data will be analysed using a phenomenological analytic strategy.

Results (preliminary)
The themes explored through the interview guide formed the basis of the preliminary descriptive coding of the focus group data: Defensive medicine was understood as practices that serve the function to protect the physician against the patient as potential plaintiff.
All GPs agreed that they experienced an increasing demand for diagnosing and treatment as well as they felt an undermining of their own authority as a GP and medical judgement. Rejecting a patient's request for diagnostic test or treatment was perceived as a heavy psychological burden in some cases leading to demotivation and job dissatisfaction.
Defensive practices were motivated by pressure from patients, other health professionals, society and influenced by the health care culture mediated by the media.
The GPs called for a culture change, e.g. by reducing „scare campaigns” and by problematizing the relevance of national diagnostic and treatment guarantees within a relatively short time limit for certain diagnoses.

Conclusion
The preliminary results suggest that defensive practices in general practice have predominantly negative consequences for the patients, the GPs and society at large. According to our informants it may lead to a decrease in the quality of care, a decrease in job satisfaction of the GPs and to an unwarranted use of health care resources.

Keywords: Defensive medicine, general practice, phenomenology, medical malpractice, health care costs.

OP002 Academic Detailing - one-to-one producer independent knowlegde based updating visits for GPS. Caring for GPs where they are!

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Background/context
The Department for Clinical Pharmacology and the Regional Medicines Information and Pharmacovigilance Center (RELIS), St. Olavs Hospital, Trondheim has for many years offered educational outreach services towards primary health care, continuously searching for methods that is proven to make lasting changes in family doctors behavior. After reading literature on Academic Detaling, and visits to The National Prescribing Service (NPS) in Australia and NaRCAD in Boston we realized that we wanted to try Academic Detailing as a method for an educational outreach towards general practitioners in Norway.
We received a small grant from the Norwegian Health authorities, and conducted a small pilot project in the cities of Trondheim and Tromsoe in the spring of 2015. In this session we wish to share our experiences from introducing Academic Detailing for the first time in Norway.

Intervention and details on implementation
Our first pilot was on Wiser use of NSAIDs, with focus on reducing the widespread use of diclofenac in Norway, due to the high risk of cardiovascular disease associated with diclofenac. 213 family doctors was given a 20 minute one-on-one visit with a brochure developed for the campaign.

Evaluation methods
The pilot was evaluated through electronic questionnaires to all participating doctors, in-depth-interview with a group
of participating doctors and data from The Norwegian Prescription Database (NorPD) to evaluate changes in prescribing of NSAIDs. The main outcome was reduction in prescribing rate for diclofenac.

**Results**

The general practitioners gave a very high rating, with most doctors welcoming a new visit with another campaign. The prescribing of diclofenac was reduced in Tromsøe and Trondheim compared to other areas in Norway.

**Conclusions/lessons for other programs** –

As our NSAIDs pilot was a success we got more funding in 2015 when the government launched a plan to fight antibiotic resistance. In cooperation with The Antibiotic Centre for Primary Care, The Norwegian Institute of Public Health and The Norwegian Surveillance System for Antibiotic Resistance we made a new AD campaign **Wiser use of Antibiotics**. In the first part of this campaign we visited about 450 family doctors, and as the campaign was very well received among the family doctors and we got some media coverage our Ministry of Health wanted to continue our campaign to new counties. During 2016 this campaign has been spread to large parts of Norway, and we are working to establish AD as a national service for all general practitioners in Norway. Results in detail will be shown in the presentation.

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**OP003 Determinants of participation in targeted preventive health checks: the TOF pilot project**

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**Background**

Evidence on targeted and systematic screening of chronic disease is limited. To effectively target people at high risk of lifestyle-related disease, there is a substantial need to advance and implement evidence-based health strategies and interventions that facilitate the identification and management of people at high risk in the population. Reach is a cornerstone in the evaluation of preventive health checks. Even if the intervention is effective in itself, effect can only be expected if the intervention reaches persons who will benefit from the intervention.

**Objectives**

To examine the reach of a preventive healthcare intervention that systematically identifies patients at high risk of developing lifestyle-related disease, and provides targeted and coherent preventive services to these individuals.

**Material/Methods**

The study population comprises 8814 persons born between 1957 and 1986 registered with 47 general practitioners (GP) in two municipalities in the Region of Southern Denmark. The intervention comprises a two-pronged approach: (1) a joint intervention that applies to the entire sample, regardless of whether the participants are healthy, at risk, or already in treatment for T2DM, COPD, CVD, hypercholesterolemia or hypertension, and (2) a targeted intervention that is offered only to participants who presumably would benefit from either further examinations at the GP (high risk), or community health services, such as smoking cessation, dietary advice, or physical activity (health-risk behavior). Reach is examined at three consecutive steps during the intervention. The first step is the consent. The second step is the joint intervention, and the third step is the targeted intervention in general practice and the municipality respectively. Data concerning demographic information, prescriptions, and health care usage of the study population will be obtained from Statistics Denmark and analysed using logistic regression.

**Results**

Preliminary results show that 41 % consented to the project and 75 % here of participated in the joint intervention. Of the participants at high risk (N=582) 20 % consulted the GP, while 21 % of the participants with health-risk behavior (N=618) consulted the municipality for community health services. Further results from associations between socio-demographic characteristics and health of attenders and non-attenders will be presented at the conference.

**Conclusion**

Preliminary results show a reach that is comparative to similar studies performed nationally and internationally. Analysis of information from Statistics Denmark on socio-demography and health will provide further insight into whether the intervention reaches the people who can expect to benefit from the intervention.

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**OP004 Patient safety culture in Norwegian nursing homes.**

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**Background**

Patient safety culture is how leader and staff interaction, attitudes, routines, awareness, and practices protect patients from adverse events. The Safety Attitudes Questionnaire is one of the most widely used instruments to
measure safety attitudes amongst health care providers. The instrument aims to identify possible weaknesses in clinical settings, and motivate and guide quality improvement interventions and reductions in medical errors. The original version of the Safety Attitudes Questionnaire includes six major patient safety factors: Teamwork climate, Safety climate, Job satisfaction, Perceptions of management, Working conditions, and Stress recognition. Nursing home patients are at particularly high risk of adverse events due to their cognitive impairment, complex multiple diseases, and medications.

**Objectives**
The aim of this study was to investigate psychometric properties of the Safety Attitudes Questionnaire – Ambulatory Version in the Norwegian nursing home setting. We also aimed to study whether variations in safety attitudes amongst employees in nursing homes were related to professional background, age, work experience, and mother tongue.

**Material/Methods**
In February 2016, 463 health care providers working in five nursing homes in Tønsberg, Norway, were invited to answer the Safety Attitudes Questionnaire, translated and adapted to the Norwegian nursing home setting. Statistical analysis included confirmatory factor analysis and multiple linear regressions.

**Results**
Of the 463 health care providers, 288 (62.2%) answered the questionnaire. At the Nordic Congress, we will present the psychometric properties of the Safety Attitudes Questionnaire – Ambulatory Version for Norwegian nursing homes. We will also present variations in safety attitudes amongst health care providers in nursing homes, and compare safety culture with findings in other primary care services, such as Norwegian GP practices and out-of-hours clinics.

**Conclusions**
The results of our study indicate that the Norwegian version of the Safety Attitudes Questionnaire may be a useful tool for measuring several aspects of patient safety culture in the nursing home setting. Patient safety culture assessment may help nursing home leaders to initiate targeted quality improvement interventions. Further research should investigate whether there is an association between patient safety culture in nursing homes, as measured by the Safety Attitudes Questionnaire, and occurrence of adverse events among the patients.

**Keywords**
Adverse events, Medical errors, Nursing homes, Patient safety culture, Quality improvement, Safety attitudes questionnaire

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**OP005 Controlling primary care emergency referrals. Interventions and results in Jämsä hospital emergency department 2010-2016**

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**Background**
Emergency visits cause a significant burden to the healthcare. Too often only the amount of referrals is discussed, but very little is known about why the referrals are made. The Jämsä Health Centre emergency department provides acute health services for a population of 22,000. The municipal’s own hospital has capacity to respond to certain acute conditions, but the most demanding cases are referred to central hospitals. Unnecessary referring to central hospitals is costly for the municipality and also wastes the resources in the specialized care.

**Objectives**
The purpose of this study was to evaluate how well the suitable patients were directed to municipal’s own hospital and how the number of referrals were changed after interventions in emergency department.

**Materials and methods**
The number of referrals to the central hospitals was collected from the health center’s electronic medical record statistics. The lack of room in the own hospital as a reason for referring was assessed. The referrals and patient records were read for this purpose and also was checked, if the referring physician had consulted a senior colleague about referring. Four interventions were made during the last two years of the observation period. In June 2015 consulting a senior before referring was made obligatory and in March 2016 a three-bed observation unit was opened in the emergency station making possible to keep patients over 1-2 nights. A small increase was also made in the bed capacity of the hospital in March 2015 and the acquirements of the home nursing team were developed to answer also to acute needs.

**Results**
Jämsä emergency department’s physicians were visited 67804 times 2010-2016. In yearly average 745 patients were referred to specialist care 2010-2014. 635 patients were referred in 2015 and 385 by the end of October 2016. It seems that the number of referrals has decreased to the end of the observation period, especially in 2016 from the average of 7.2 % to 5%. The detailed results will be presented in the congress.

**Conclusions**
It seems that a significant decrease in the amount of referrals has occurred related to these actions. Supporting a general physician with consultation possibilities helps to optimize referring and using the capacity of the own
hospital. Moreover, arranging enough room for the patients appears to help avoiding referring otherwise unnecessary. This will be beneficial to the municipality in keeping the expenses lower. In central hospitals the resources saved can be used for more appropriate purposes. Further research is needed from controlled trials to confirm these results.

**OP006 Use of antipsychotic drugs by elderly primary care patients and the effects of medication reviews**

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**Background**
Antipsychotics form a class of drugs which should be used with caution in the elderly due to a high risk of adverse events. Despite the risks and the modest effects their use is estimated to be high, especially in nursing homes. This study aimed to explore the effects of medication reviews on antipsychotic drug use for elderly primary care patients and describe the extent of, and reasons for, the prescription of antipsychotics.

**Methods**
This was a cross-sectional analysis to examine use of antipsychotics among elderly patients in primary care in Skåne, Sweden. Patients ≥75 years living in nursing homes or in their own homes with home care, who received a medication review during 2011-2012, were included.

The use of, and indications for prescription of antipsychotics, were documented, as were the differences in characteristics between patients receiving or not receiving antipsychotics. The effects of medication reviews were also noted.

**Results**
A total of 1683 patients aged 87.6 (±5.7) was included in the analysis. Of the 206 patients using antipsychotics, 43% (n=93) had an approved indication while for 15% (n=32) the indication was not given. The use of antipsychotics was more common with increasing number of drugs (p=0.001), and in nursing home residents (p<0.01). It was also more frequent in patients with cognitive impairment, depressive symptoms, sleeping problems or fatigue. Medication reviews reduced the use of antipsychotics by 23% in elderly patients participating in this study.

**Conclusion**
The use of antipsychotic drugs is high in elderly patients in nursing homes, particularly those with cognitive impairment, depressive symptoms or difficulty in communication. They are often given for indications that are not officially approved, or poorly documented. Medication reviews appear to offer one useful strategy for reducing excessive use of these drugs.

**OP007 Prevalence of antibiotic resistant E. coli in patients with suspected Urinary Tract Infection in Primary Care in Denmark: an observational study**

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**Background:** Urinary Tract Infection (UTI) is the second most common bacterial infection managed in primary care. *Escherichia coli* is the most common pathogen causing UTI. Data from the current National Surveillance program in Denmark (DANMAP) may not represent accurately the prevalence of resistant *E. coli* in primary care because only selected samples are sent to the microbiological department for culture and susceptibility testing, and thereby included in DANMAP.

**Objectives:** To pilot a surveillance program for resistant *E. coli* in patients with suspected UTI attending general practice in Denmark, and assess the prevalence of resistant *E. coli* to the most commonly used antibiotics in this setting.

**Material/Methods:** Prospective study carried out from December 2014 to December 2015. General practices from the Capital region included adult patients with suspected UTI. For each patient a urine sample was sent to the Statens Serum Institut (SSI) for culture and susceptibility testing. Urine with significant growth of *E. coli* were examined for resistance against sulfamethoxazole, trimethoprim, ampicillin, nitrofurantoin, mecillinam and ciprofloxacin.

**Results:** In total, 39 practices included 490 patients in the study. 261 (53%) patients had significant bacteriuria. *E. coli* was the most common uropathogen both in uncomplicated (69%) and complicated (70%) UTI. Almost half (45%) of the urine samples contained *E. coli* strains that were resistant to at least one of the six antibiotics tested and 60%
were resistant to more than one antibiotic. The highest resistance was found for ampicillin (34%, 95% CI 27.41) and sulfamethizol (27%, 95% CI 20.34). All E. coli isolates were susceptible to nitrofurantoin. Patients with uncomplicated and complicated UTI had the same pattern of antimicrobial resistance. The prevalence of resistance was similar to the one reported by DANMAP 2015.

**Conclusion:** Patients with both complicated and uncomplicated UTI in general practice in Denmark are infected with bacteria with high resistance to antibiotics commonly used in primary care. Data from DANMAP reflects the actual resistance patterns in general practice and can be used to guide the decision for choice of antibiotic in patients with suspected UTI attending general practice.

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**OP009 Prevalence of bacterial resistance and the relation to antibiotic consumption in children with respiratory tract infections in Swedish primary care**

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**Background:**
In Swedish Primary Health Care (PHC) about one third of all consultations concern infections, of which some 60% regard respiratory tract infections (RTI). The most common agent causing RTIs in children is *S. pneumoniae*. In 1967 the first strain of *Streptococcus pneumoniae* with reduced susceptibility to penicillin (PNSP MIC≥0.125 mg/L) was encountered and in the early 1990’s an increase of PNSP (MIC≥0.125 mg/L) from 3 to 11% was noted also in Sweden. *Haemophilus influenzae* is the second potential pathogen targeted when treating RTIs. Since 2013 there has been a decreasing trend in Sweden for beta-lactamase producing penicillin non-susceptible *H. influenzae* (BPNSHi) and an increasing trend of non-beta-lactamase penicillin producing non-susceptible *H. influenzae* (NBPSNHi). Resistance data in Sweden are based on cultures from nasopharyngeal swabs from both hospital and primary care patients, but in Sweden, as in other countries, the level of bacterial resistance in children seeking PHC is not known.

**Objectives:**
The aim was to evaluate the prevalence of PNSP and BPNSHi and NBPSNHi in children with RTI presenting at Primary Health Care Centers. Furthermore, to investigate the relation between presence of resistant bacteria (PNSP, BPNSHi, NBPSNHi) and previous antibiotic consumption and other risk factors and to compare our findings with those of routine microbiological lab data.

**Material/Method:**
Between Nov 1st 2013 and April 30th 2015 nasopharyngeal cultures were obtained from children 0-10 years of age seeking care with symptoms of respiratory tract infection at 12 Primary Health Care Centers. Parental questionnaires were used to retrieve information on the child’s previous antibiotic consumption. Isolated *S. pneumoniae* were screened for penicillin resistance and *H. influenzae* for beta-lactam resistance.

**Result:**
Cultures from 340 children were gathered. Preliminary data shows that the level of resistant bacteria was low and the prevalence of pneumococci with reduced sensitivity to penicillin (PNSP MIC≥0.125 mg/L) was 6% compared to 10% in corresponding cultures from children diagnosed at the local clinical microbiology laboratory. Further analyses on relation between presence of resistant bacteria (PNSP, BPNSHi, NBPSNHi) and previous antibiotic consumption and other risk factors will be performed and presented.

**Conclusion:**
Low prevalence of PNSP supports the use of phenoxymethylpenicillin as empirical treatment for RTIs in primary care. The difference in prevalence of resistant bacteria in our result compared to the local clinical microbiology laboratory data emphasis the importance of studies being performed on primary care populations.

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**OP010 Erythema migrans in general practice. A randomised controlled trial comparing phenoxymethylpenicillin, amoxicillin, and doxycycline, with a one-year follow-up**

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**BACKGROUND**
Erythema migrans (EM) is the most common manifestation of the tick-borne zoonosis Lyme borreliosis (LB).

**OBJECTIVES**
To investigate the effects of three different antibiotic regimens for the treatment of clinically diagnosed EM in general practice.
MATERIAL AND METHODS
Design: Randomised, parallel, controlled trial, with investigators blinded to the treatment groups. Non-commercial drug trial sponsored by the University of Oslo.
Setting: 44 Norwegian general practices.
Participants: 188 patients with EM were included by their general practitioner (GP) and randomised to different antibiotic treatment groups. Patients aged ≥18 years, clinically diagnosed with EM were eligible for inclusion.
Interventions: Block randomisation was processed in blocks of six. Patients were assigned to receive one of the three antibiotic treatments for 14 days: phenoxymethylpenicillin (PCV, n=56), amoxicillin (n=64), or doxycycline (n=68). Treatments were open to the patients, but blinded for the GPs and investigators.
Main outcome measures: The primary outcome was the median duration of EM in days in the three treatment groups. Patients kept a diary for the 14 days of treatment, in which they registered concomitant symptoms and side effects. The patients consulted their GP after 14 days and had a one-year follow-up to monitor any development of disseminated LB.
RESULTS
188 patients were included by 44 GPs. The median duration of EM was 13 days in all patients, 12 days for the amoxicillin group, and 13 days for the PCV and doxycycline groups. The duration of EM did not differ significantly between the three antibiotic groups (P=0.277). Compliance with treatment was >96% in all treatment groups. 46% of the patients experienced minor side effects of the treatment, but this percentage did not differ significantly between the groups (P=0.759). None of the patients showed any sign of disseminated LB at the one-year follow-up. Altogether there were two adverse events during treatment.
CONCLUSION
PCV, doxycycline, and amoxicillin are equally effective and safe in the treatment of clinically diagnosed EM in primary care.
TRIAL REGISTRATION
other things, we will be able to identify any differences between practice staff and GPs in handling this type of patients. Knowledge from this project can be used for both quality improvement initiatives within the practices as well as national initiatives to reduce inappropriate prescribing of antibiotics.

Keywords: Antibiotic prescribing; Acute respiratory tract infections; General practice; Quality improvement.

OP012 Ibuprofen versus mecillinam for uncomplicated cystitis in women - a double blind randomized trial.

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Background and objectives
Although uncomplicated cystitis is often self-limiting, most patients will be prescribed an antibiotic treatment. Previous studies have demonstrated that use of an NSAID can reduce the need of antibiotics in these patients. We wanted to investigate whether treatment with an NSAID was as effective as an antibiotic in achieving symptomatic resolution in this condition.

Material and methods
This was a randomized, controlled, double blind trial. Women between the ages of 18 to 60 presenting with symptoms of uncomplicated cystitis were screened for eligibility. 383 women from four sites in Norway, Sweden and Denmark were allocated to treatment with either 600 mg ibuprofen three times a day or 200 mg mecillinam three times a day for three days. The primary outcome was the number of patients who felt cured by day four. Secondary outcome measures were the number of patients in need of a secondary medical consultation and, among these, how many developed an upper urinary tract infection.

Results
Data from all the sites have been collected and we are about to start working on the analysis. We aim to be able to present some preliminary data at the Nordic Congress of General Practice in June 2017.

OP013 Drop in lung function during asthma and COPD exacerbations - can it be assessed without spirometry?

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Background.
When assessing patients with exacerbation of asthma or COPD it may be useful to know the drop in forced expiratory volume (FEV₁) compared to stable state, in particular when considering treatment with oral corticosteroids. The objective of the study was to identify indicators of drop in FEV₁ during exacerbations.

Methods.
In this prospective multicenter study from primary care, patients diagnosed with asthma or COPD were examined at stable state and during exacerbations the following year. Symptoms, chest findings, and pulse oximetry were recorded and spirometry was performed. A fixed drop in FEV₁ (10% and ≥200 ml) and percentage change in FEV₁ were outcomes when possible indicators were evaluated.

Results.
380 patients attended baseline examination, and 88 with a subsequent exacerbation were included in the analysis. Thirty (34%) had a significant drop in FEV₁ (10% and ≥200 ml). Increased wheezing was the only symptom associated with this drop, with a Likelihood Ratio of 6.4 (95% CI 1.9-21.7). Significant association was also found for crackles, any new auscultation finding, and, among the patients diagnosed with COPD, a ≥2% drop in oxygen saturation (SpO₂) to ≤92%. Very bothersome wheezing and severe decrease in oxygen saturation were also very strong predictors of change in FEV₁ in linear regression adjusted for age, gender, and baseline FEV₁ % predicted.

Conclusions.
Increased wheezing, as experienced by the patient, and a decreased SpO2 value strongly indicated a drop in lung function during asthma and COPD exacerbations and should probably be taken into account when treatment with oral corticosteroids is considered.

OP014 Is the stethoscope useful in the diagnosis of chronic lung and heart disease?
Background:
The occurrence of asthma in our study population is similar to that of previous research. Use of regular asthma or antiallergic medication could be useful for general practitioners when advanced diagnostic methods are not available.

Objectives:
To explore the diagnostic accuracy of abnormal lung sounds in relationship to chronic lung and heart diseases.

Material/methods:
With the use of microphone set in a stethoscope tube we obtained audio recordings from six locations in the thorax of 4000 randomly selected participants from the Tromsø 7 Study. The participants were 40 to 80 years old. In addition to the sound recordings, they completed questionnaires about respiratory symptoms and self-reported disease. We also took levels of HsCRP, percentage of peripheral oxygen saturation and a spirometry test. Echocardiography and pro-BNP were also part of the survey in a subset (50%) of our sample.

Two health professionals classified the audio recordings, with the help of spectrograms, looking for the presence of wheezes or crackles. We cross-compared these classifications to find all the disagreements and these were solved in consensus meetings with the help of a third classifier. Four researchers further analyzed all the abnormal sounds to describe characteristics possibly related to the clinical significance (Duration, repeatability, magnitude, number, etc).

Comparing the presence of abnormal lung sounds to the findings of the tests described, by means of descriptive statistics, regression techniques and ROC curves, we will be able to make some statements about how abnormal lung sounds can contribute to establish a correct diagnosis of chronic lung and heart disease.

Results:
This is, to our knowledge, the largest and most complete collection of lung sounds performed to date. Preliminary results will be presented at the XXth Nordic Congress of General Practice.

OP016 Health service use and adherence to medical therapy among adult Finnish asthma patients

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Background:
Bronchial asthma is one of the most common chronic diseases among adult primary care patients. Prevalence of asthma in adult Finnish population has been shown to be from 6% to 9.6%, and increasing by age of the population. In Finland asthma is usually diagnosed and treated within the primary care setting by general practitioners at municipal health care centers and doctors working at occupational health services. Private health care, including specialists in pulmonology, is available on patients' own cost. Previous research has shown that the adherence to medical therapy in asthma is lower than in many other chronic diseases. Reasons to this are diverse and not fully understood. Asthma medication use among adult asthma patients in Finland has been reported to be 63%. To our knowledge, studies about effects of health service use on asthma medication adherence in Finland have not been published.

Objectives:
To study asthma patients' health care service use and adherence to asthma or antiallergic medication therapy, compared with non-asthmatic control group.

Material/Methods:
We used data from The Health and Social Support Study 2012 (HeSSup), which is part of a nationwide cohort study among randomly selected adult Finnish population. Patients were classified as asthmatic or non-asthmatic based on their answer to the question: „Has a doctor ever said that you have or have had bronchial asthma“.

Total number of responses to this question was 12 854. Patients who answered „Yes“ were divided into three groups according to self-reported frequency of asthma or antiallergic medication used during the previous year: no use at all, use less than six months and use more than six months (regular use). Non-asthmatic responders of the HeSSup 2012 study population were used as a control group. Questions concerning use of health care services were analyzed between the groups.

Results:
There were 1141 asthmatic patients in the study population. The occurrence of asthma was 8.8%. Altogether 54.8% of asthma patients had used asthma or antiallergic medication more than six months during the previous year. Nearly one third (31.6%) of asthma patients had used this kind of medication less than six months and 13.6% had not used asthma or antiallergic medication at all. Final results including the analyzes of health care service use will be presented at the congress.

Conclusion:
The occurrence of asthma in our study population is similar to that of previous research. Use of regular asthma or antiallergic medication is quite low among asthma patients and in accordance to previous studies. Conclusion of the
whole study will be made after all results are ready, and it will be presented at the congress.

keywords: asthma, medication adherence, health service use

OP017 Biomarkers in patients with Chronic Obstructive Pulmonary Disease in general practice: A prospective cohort study

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Introduction:
Chronic Obstructive Pulmonary Disease (COPD) is a common chronic disease primarily treated in primary care. It is a complex and heterogeneous disease and the trajectory is difficult to predict. The overall aim of this study is to investigate predictors of the trajectory of COPD treated in primary care and to determine the added value of selected biomarkers such as microfibrillar-associated protein 4 (MFAP4) and surfactant protein D (SP-D).

Methods:
Prospective cohort study comprising COPD patients. A total of 38 Danish practices were included in the study. Criteria for inclusion were a diagnosis of COPD (ICPC code R95-), age ≥ 40 years, Danish language speaking, no severe psychiatric or cognitive disease and ability to visit the GP surgery. Prevalent as well as incident patients diagnosed with COPD were eligible. Baseline data included a patient questionnaire and validated questionnaires regarding respiration, activity of daily living, depression and fatigue. Further, clinical indicators of the patient's COPD status were obtained as well as blood samples for biomarkers. End points will include rates of exacerbations, hospitalizations, deaths and decline in lung function.

Results:
We included 634 patients of whom 52% are females. The mean age of the study population is 68.1 years. Additional baseline characteristics and preliminary results will be presented at the congress.

Conclusion:
In this study we explore determinants of trajectory for COPD in primary care and the added value of selected biomarkers.

OP018 Prevalence and consequences of multimorbidity in Denmark. Preliminary results from a register-based study

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Keywords
Multimorbidity, epidemiology, prevalence, mortality, primary care, general practice

Background
The number of people living with co-existing chronic diseases, multimorbidity, is rising. The consequences of multimorbidity are pronounced with increased costs for health care systems and higher mortality risk for patients. Furthermore, the majority of people with multimorbidity are in the working age and many live in deprived areas. To be able to handle and improve care for these patients we need more clinically relevant ways of working with multimorbidity, but to do so we need more knowledge of what is contained in multimorbidity. In Denmark we do not know what combinations of diagnoses are the most frequent and most hazardous.

Objectives
This presentation will present the preliminary results of an ongoing register-based study on multimorbidity in Denmark. The project explores the prevalence and mortality of certain combinations of diagnoses leading to hospital contact in Denmark.

Material/Methods
The study is a register-based prospective cohort study with all adult residents living in Denmark as the target population. Several Danish registers are used to provide information on vital status, migration, diagnoses, socioeconomic status, etc. We define multimorbidity as two diagnoses from two different groups of diagnoses out of ten groups of diagnoses which we hold to be particularly important for patients and general practice. Results We will present a brief description of the methods and some of our considerations with the project. Furthermore, we will present the preliminary results of the most frequent but also the most hazardous combinations of diagnoses in the adult Danish population.
Conclusion
Knowledge about, not only the most common diagnoses in Denmark, but also the most frequent combinations in which they appear and particularly how hazardous these combinations are for patients is a valuable basis for improving care for patients with multimorbidity. The results can serve as a basis for developing new clinical guidelines relevant for general practice where several diagnoses can be included concomitantly.

Points for discussion
How can we make these results relevant for general practice? Is it meaningful to use the term multimorbidity and is it relevant for general practice? What is important to consider when transferring these results from secondary data to a primary care context? Could there be differences between the Nordic countries?

Conflict of interest: None

OP019 Associations between vitamin D status and anxiety, depression and health related quality of life in an immigrant population. A population-based study from Sweden.

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Background
Low 25(OH)D levels has been shown to be associated with depression. Immigrants from non-western countries report symptoms of anxiety and depression more frequently than the general population in Sweden. Immigrants assess their state of health as bad more often than Swedish born citizens. Deficient vitamin D status is common in immigrants in Sweden. A threshold for the effect of vitamin D on different outcomes has been suggested. 25(OH)D3 less than 25 nmol/L is considered as vitamin D deficiency and according to the Institute of Medicine 25(OH)D3 50 nmol/L or higher is considered enough for optimal bone health.

Objectives
To evaluate associations between vitamin D status and anxiety and depressive symptoms and health related quality of life in immigrants from the Middle East and Africa living in Umeå, Northern Sweden.

Subjects/Methods
The participants in the cross-sectional population-based Vitamin D Deficiency in Immigrants (VIDI1) study (n=195, 104 men and 91 women) were examined. Symptoms of anxiety and depression were measured with the Hospital Anxiety and Depression scale. Health related quality of life was measured with EQ5D and EQ VAS. 25(OH)D3 was measured with HPLC. Anthropometry, medical, socioeconomic and lifestyle data were registered. p < 0,05 was considered significant.

Results
There was no association between 25(OH)D3 and anxiety (HADA ≥ 11points), depression (HADD ≥ 11points) or health related quality of life in the total immigrant population.
Anxiety was associated with female sex and Middle East origin. In Middle Eastern women, multivariable logistic regression showed that anxiety was associated with 25(OH)D3 ≤ 49 nmol/L, sick-leaves and absence of physical activity. There were no associations between 25(OH)D3 ≤ 49 nmol/L and anxiety in Middle Eastern men or in African men or women.
Vitamin D deficient immigrants had higher HADD scores than immigrants with 25(OH)D3 ≥ 25 nmol/L. This remained significant only in women when analyzing men and women separately.
There was an association between 25(OH)D3 ≤ 49 nmol/L and HADD scores in Middle Eastern participants and this association remained only in Middle Eastern women when analyzing men and women separately.

Conclusions
Anxiety was frequent in Middle Eastern women and in this group 25(OH)D3 ≤ 49 nmol/L was associated with anxiety after adjustments. There were no associations between anxiety and vitamin D status in Middle Eastern men or in African immigrants. Vitamin D status was not associated with higher frequency of depression or with health related quality of life in immigrants.

Key words
25-hydroxyvitamin D, vitamin D deficiency, vitamin D status, Anxiety, Depression, Health related quality of life, EQ5D, Immigrant, Cross-sectional study.

OP020 Prediction of treatment response in newly diagnosed type 2 diabetes patients. The Skaraborg Diabetes Register

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Background
Type 2 diabetes is associated with severe and increasing micro- and macrovascular complications which can be postponed by control of glucose and blood pressure level. Still it is largely unknown which patients have poor treatment response and high risk for complications and biomarkers are studied for this purpose.

Objectives
The aim of the study was to investigate the association between clinical factors such as HbA1c, blood pressure, smoking and level of biomarkers i.e. C-peptide and copeptin at diagnosis and changes in HbA1c, blood pressure or BMI five years after diagnosis.

Material/methods
Clinical data and blood samples from 460 newly diagnosed patients with type 2 diabetes from the Skaraborg diabetes register (SDR) were retrieved from the time of diagnosis and after 5 years. Clinical data came from the patients’ medical records and biomarkers were analyzed with validated methods. Statistical analyses were linear and logistic regressions.

Results
A high BMI at diagnosis and smoking were associated with less reduction of HbA1c i.e. poorer treatment outcome after 5 years compared to low BMI and non-smoking. A high HbA1c at baseline predicted a greater reduction of HbA1c and an increased prescription of insulin after 5 years. High baseline values for systolic blood pressure were associated with greater reduction over time, the same was found for BMI. The biomarkers were not associated the development of systolic blood pressure, HbA1c or BMI over time.

Conclusion
Patients that smoke and patients with high HbA1c at diabetes diagnosis respond significantly poorer to treatment over 5 years. This highlights the importance of advice and measures for non-smoking and weight reduction and more intensive treatment over time.

OP021 Socio-economic status, type of municipality and long-term effect of structured personal diabetes care, a 19 year follow up of the randomized controlled study Diabetes Care in General Practice (DCGP)

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Background
We investigated how socio-economic status and whether patients lived in rural or urban areas influence the effect of an intervention with structured personal care of patients with newly diagnosed Type 2 DM (T2DM), evaluated on process of care goals after 6 years of intervention and on mortality and morbidity 19 years after diagnosis.

Methods
Conducted as a cluster-randomized population-based trial, of 1381 patients, newly diagnosed with T2DM. All practices (474), were randomized to either structured personal care vs. routine care. We investigated whether, level of education, occupation, civil status (living single vs. cohabiting) and whether patients lived in rural or urban areas influenced the effect of the intervention. Evaluated on the attainment of process care goals, 6 years after diagnosis: Glycated haemoglobin, cholesterol and creatinine level, proteinuria, blood pressure, pharmacotherapy, number of consultations, diet, attitudes of the patient, and patient motivation in the GPs opinion. Moreover evaluated, in a register based follow-up, in the following 19 years after diagnosis on: mortality and diabetes related cardio vascular complications.

Results
Patients benefited from the intervention, regardless of socioeconomic status. Patients with lower level of education had greater effect of the intervention compared to patients with higher education on cholesterol-levels (p=0.05), as for patients who lived alone experience significantly more diabetes consultations as a result of the intervention compared to patients who were married or were cohabiting.

Patients from rural areas were less often treated with statins (p=0.0377), but on the other hand experienced a better effect of the intervention on serum creatinine levels (p=0.048), compared to patient from urban areas. Overall patients of rural areas had poor effect of the intervention compared to patient living in urban areas, evaluated on morbidity (p=0.0337).

Conclusion
Patients living in rural areas had significant less effect of the intervention compared to patients living in urban areas evaluated on morbidity due to T2DM. Intervention with structured personal care of T2DM, meant at least the same effect on morbidity and process of care goals, regardless of low socio-economic status, that being living single, low level of education and occupation. The inequity in mortality and morbidity although still exist in spite of the intervention.
OP022 Diabetes and multimorbidity. Seven years follow-up of general practice patients in Iceland

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Background:
Diabetes Mellitus type II (DM II) is extremely common, and usually treated in the primary care setting. It is, however, well known that the diabetes in itself can be seen as the top of an iceberg, and patients with DM II often have a clustering of other diseases. The index disease, in this case DM II, can be a useful tool for motivating patients for regular follow up but our doctor-patient relationship, continuity of care, and medical records, give us opportunistic potential to identify and possibly analyse the whole picture of our patients.

Objectives:
a) to analyse the outcome of long time follow up of DM II patients, and
b) to analyse the characteristics of DM II patients in primary care, with special reference to co-/multimorbidity.

Subjects and methods:
The Health Care Centre Efra-Breidholt is staffed by 7 GPs and responsible for around 10 000 people in the catchment area. In 2007, all patients listed with DM II non-insulin dependent 18 years and older, were invited to join a regular and organised follow up of their diabetes at the health center, measuring fasting blood sugar, HbA1c, BP, weight, waist circumference and serum lipids followed by physical examination and history of smoking and physical activity. Data was analysed, together with information from medical records. Multimorbidity was defined as 2 or more chronic diseases/conditions. In 2013, a total of 207 patients (117 men and 90 women) had been followed up for max 7 years.

Results:
Comparing last measured values and values at baseline, there was a small but significant reduction in cholesterol, systolic and diastolic blood pressure, for men and women (p-values 0.05 to 0.001), and blood sugar (p < 0.05), and BMI (p < 0.05) for men. No changes could be seen on serum HbA1c or waist circumference. Among men 16% were still smokers (and 55% had quit). For women 25% smoked (and 33% had quit). 99% were multimorbid, and 92% had three or more diseases. The average number of diseases/conditions was 5.7 (SD + 2.4) among men, and 7.7 (SD +3.6) among women. The most common co-morbid diseases were hypertension, musculo-skeletal disorders, obesity, depression and insomnia.

Conclusions:
During several years follow up we observed a steady state in blood sugar for both sexes but a reduction in blood pressure and cholesterol. Smoking was still prevalent, but the majority of smokers had quit. Primary care in general and general practice in particular, are optimal arenas to identify and manage people with complex disease burden.

OP023 Vitamin D-Binding Protein in Somali women living in Sweden was low and unaffected by treatment

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Background:
Vitamin D deficiency is common in immigrants. Whether vitamin D-binding protein (DBP) is genetically determined or influenced by external factors is not fully clarified.

Objective: The aim was to study the influence of age, gender and ethnicity, and the effect of vitamin D treatment on vitamin DBP

Material/Methods:
A randomized, placebo-controlled and case-controlled study was conducted in Primary health care center and university hospital. Somali women (n = 111), latitude 0-10°N, living in Sweden, latitude 57°N, were given 800 IU or 1600 IU cholecalciferol daily or UVB, and similar amounts of placebo (drops or Wood’s lamp) during twelve weeks. A random population sample of men (n = 50) and women (n = 231) from the same region was used as controls. Serum DBP and S-25(OH) D were monitored before and every six weeks during treatment, with follow-up three months after the treatment.

Results:
Vitamin D deficiency was prevalent in 73 % of the Somali women and in 5 % of the population. DBP was lower in Somali women than in Swedish women (p < 0.0001). DBP did not differ between men and women in the population and did not correlate with age, body weight or bone mineral density. DBP was positively correlated with S-25(OH) D in the control women (p = 0.019). DBP did not increase with increasing S-25(OH) D levels during vitamin D
Conclusions: DBP was determined by vitamin D status but was independent of age, gender, ethnicity, body weight, bone status, time or vitamin D treatment. The latter could be due to suboptimal dose and/or duration.

Key words: Vitamin D-Binding Protein, Immigrants, Treatment

OP024 ‘Selected or not selected’ to multimodal pain rehabilitation: what guides the decision?

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Background. The National Model for Transparent Prioritisation in Swedish Health Care (2011:4) is based on the human dignity principle and its subordinate principles of needs-solidarity and cost-effectiveness. Moreover, the Swedish medical indications for selection to multimodal rehabilitation (MMR) emphasise that MMR is highly relevant for patients with complex pain and needs of rehabilitation. Also, review of effect studies support selection to MMR by complexity of the pain (SBU 2010). However, there is little knowledge of differences in patient characteristics between those who are selected to MMR and those who are not.

Objectives. To operationalise the ethical principles and medical indications of selection to MMR thru variables available in the study, and examine potential differences between the selected group and the non-selected group by use of these variables.

Material/methods. The study sample consisted of 851 patients (age 18 to 64 years) who were referred from primary health care to a pain rehabilitation clinic in secondary health care (Sweden) during the period from 5 November 2007 and 13 December 2010. Patient data on sociodemographic, pain and general health were collected from the Swedish Quality Registry of Pain Rehabilitation and linked to the patients’ medical records containing the final decision on selection to MMR or not.

Results. Operationalisation of the ethical principles and medical indications was visualised and guided further analyses. We found statistically significant differences in the distribution of gender, working status, pain location, depression and expectations of recovery between the selected and non-selected group. Women, employed, those with located pain, possible depression (HADS) and those with high and moderate expectations of recovery were more likely to be prioritised to MMR. We found no differences between the selected and non-selected group with respect to duration of pain, pain severity, pain interference with daily life, number of pain sites, anxiety, mental distress, satisfaction with life in general and satisfaction with physical and psychological health.

Conclusion. Prioritising women before men and employed before unemployed are not in line with the ethical principles of prioritisation in the Swedish health care. Moreover, the rationale for selecting pain location, depression and expectations of recovery as suitable measures for selection of patients to MMR, needs further discussion. Finally, there may be important reasons for selection that are not available for statistical processing and should be explored thru qualitative methods.

OP025 Disability of primary chronic headache in the general population - the Akershus study of chronic headache

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Background. Primary chronic headaches (headache >15 days/month) are associated with disability, anxiety, depression and high societal costs. However, most current knowledge about primary chronic headache is from selected specialised clinics and patients in specialised headache clinics, general practices and in the general population differ.

Objectives. To explore the burden of disease for primary chronic headaches in the general population.

Methods. An age- and sex-stratified random sample of 30 000 persons aged 30–44 years from the general population received a mailed questionnaire. Those with self-reported chronic headache were interviewed by headache experts. The questionnaire response rate was 71%, and the rate of participation in the interview was 74%. The International
Classification of Headache Disorders was used. Data on socioeconomic impact and health care utilisation were self-reported, headache-related disability was assessed by the Migraine Disability Assessment (MDAS), the level of psychological distress by the Hopkins Symptom Checklist-25 (HSCL-25) and illness perception by the revised Illness Perception Questionnaire (IPQ-R).

**Results**
People in the general population are negatively affected by their chronic headache with approximately 1/3 on sick leave, a high headache-related disability, more than 50% suffers from high psychological distress and as a group they have a skewed illness perception. Those with medication overuse represent a subgroup that carries the largest disease burden. Participants with physician contact due to headache were significantly more affected by their primary chronic headache than those without such physician contact.

**Conclusion**
People with primary chronic headache have a high disease burden which in addition to pain include reduced quality of life, increased disability and psychological problems.

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**OP026 Development of a needs assessment questionnaire for use among the broad spectrum of cancer patients in general practice**

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**Background:**
Needs assessment is crucial to rehabilitation and survivorship care of cancer patients. Patient questionnaires are recommended to facilitate the communication between patient and professional and to support decision-making. General practitioners have an important role in this process and have requested an electronic patient questionnaire that at the same time focuses on symptoms, physical and psychosocial impairment, prioritisation of needs, and considerations about solutions.

**Objectives:**
We aimed to develop a questionnaire meeting these expectations.

**Material/Methods:**
Based on the literature and experts of the field, a first version of the questionnaire was formulated and evaluated in focus group interviews with general practitioners invited for this specific process. Next, a second draft will be evaluated in focus groups with cancer patients with different cancers, ages and expected needs. If needed a second round of interviews will be conducted before field testing in a broad sample of cancer patients.

**Results:**
The first interviews with the general practitioners underlined the need of a thorough introduction to both patients and professional users of this tool. The introduction should clarify a realistic number of needs that could be addressed at a time; the general practitioner’s knowledge may not completely cover all issues, and the range of possible interventions may be limited. The general practitioners seemed willing to take on survivorship care and to try using this patient questionnaire. They found the inclusion of comorbidity very important, and acknowledged patients’ reflections regarding prioritisation and proposed solutions. Finally, the need of a quick overview of the most important results was requested.

**Conclusion:**
The development process continues and more results will be ready to present at the conference. An acceptable tool targeted needs assessment in the general practice setting may support implementation of individualized rehabilitation and survivorship care and thus improve patient quality of life.

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**OP027 The profiles of health care utilization among non-depressed population and patients with depressive symptoms with and without clinical depression.**

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**Background**
Depression associates with increased use of health care services based on the existing knowledge and further, it
impossible task for patients and GPs. However, the health care pathways of patients with chronic heart failure are complex with many different providers involved. Thus, to secure an appropriate flow of information is a difficult if not impossible task for patients and GPs.

**Objectives**
To examine the health care utilization profiles among non-depressed population and patients with depressive symptoms (DS) with and without clinical depression.

**Material/Methods**
Data of the present study are based on the Finnish Depression and Metabolic Syndrome in Adults (FDMSA) (2009-2011) and its 5 year follow-up (2012-2016) study. The study was conducted in municipalities within the Central Finland Hospital District in Finland. The study population was based on the patients with DS scoring ≥10 in 21 item Beck Depression Inventory (BDI-21) and were at least 35 years old and referred to depression nurse case managers (n=705). The psychiatric diagnosis was confirmed with the Mini-International Neuropsychiatric Interview (M.I.N.I.). Of the patients, 447 had clinical depression. The number of patients with DS without clinical depression was 258. Random sampling was used to form a control group of 414 middle-aged (≥35 years) residents in the participating municipalities with a BDI score < 10 who participated in the same health evaluation. Use of health services (visits and calls to GP and nurse) was based on the patient records.

**Results**
Patients with DS regardless of depression diagnosis used primary health care (PHC) services more than controls (p<0.001, adjusted with the propensity score including age, sex, education, BMI, smoking, alcohol use, physical activity and use of long-term medication). There was no significant difference between participants in the numbers of the secondary care physician visits but depression and DS without depression diagnosis were associated with the increased number of calls and visits to nurse. In all subjects, health care use increased steeply from score 0 to score 10 in BDI but did not increase markedly in the higher scores.

**Conclusion**
This study reveals the higher PHC use among patients with DS with and without clinical depression compared with controls. However, the most significant relative increase of the health service use was found in lower BDI scores (0-10). These results suggest that the PHC plays the most important role in the increased health care burden related to depression and DS. PHC role in the detecting and managing people with DS and depression is essential.

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**OP028 Long term health care for patients with chronic heart failure - a routine data analysis**
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**Background:**
Heart failure is a common chronic condition especially in old age. Patients with chronic heart failure have a constrained quality of life and an increased mortality. The health care for patients with heart failure is complex due to the complexity of the condition and the usually existing comorbidities. So far, the ambulatory health care pathways over time for patients with heart failure have been unknown, yet, and which role the general practitioner (GP) plays.

**Objectives:**
To map the ambulatory health care pathways for patients with chronic heart failure in Germany and to ascertain the role of the GP within.

**Material/Methods:**
Routine data from public health insurances in Germany over a period of three years (2009-2011). 500,014 assured patients with a diagnosis of chronic heart failure were chosen randomly. From these routine data, an individual health care utilization sequence was constructed for every patient. These sequences were analyzed descriptively by the help of social network analysis. Patients were grouped into categories regarding their health care pathways.

**Results:**
Patients visited in median 12 different surgeries in three years and had 87 contacts with physicians. The health care pathways could be organized into four categories: 5% of the patients did not see a GP in these three years at least three times, 23% of the patients saw a GP and a cardiologist and 72% saw a GP but not a cardiologist. Of the latter, about half saw a GP more than 36 times in three years and the other half up to 36 times. 43% of the patients in the category seeing a GP and a cardiologist were referred to every consultation with a cardiologist by a GP. 12% of these patients had all consultations with cardiologists without referral.

**Conclusion:**
Health care for patients with chronic heart failure in Germany is mainly provided by GPs, less than a fourth is seen by cardiologists in an outpatient setting. However, the health care pathways of patients with chronic heart failure are complex with many different providers involved. Thus, to secure an appropriate flow of information is a difficult if not impossible task for patients and GPs.

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**OP029 Why do cancer survivors consult their general practitioner?**
Background and objectives

Improvements in diagnosis and treatment of cancer combined with an ageing population have resulted in increasing number of cancer survivors. This has led to a debate on follow-up regimens and how to best address the needs of survivors. Studies have shown that cancer follow-up care provided by general practitioners (GPs) can be safe and cost effective. To better understand the needs of cancer survivors and the role of GPs in follow-up care, we aimed to explore the reasons why cancer survivors consult their GP.

Materials/Methods

We performed a cross-sectional study based on data from Norwegian GPs (N=150). Data were extracted from electronic patient records by a data link sent by e-mail after acceptance to participate. The following data were collected: cancer patients the last 12 months, age, gender, the cancer diagnosis and diagnosis that caused general practice consultation. The study will be completed during winter 2017.

Results

We aim to present results from the study regarding the reasons why cancer survivors consult their GP.

Conclusion

We intend to present results from the study that hopefully will increase our understanding of the needs of cancer survivors and the role of the GP in cancer follow-up care.

OP030 Team-work in primary palliative care: General practitioners’ and specialist oncology nurses’ complementary competences

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Background:

Generalists like GPs and district nurses have been main actors in community palliative care. Specialist oncology nurses, with postgraduate training in palliation, are increasingly employed. There is little research on their contribution.

Objectives:

To explore how general practitioners (GPs) and oncology nurses (ONs) experience their roles and collaboration in primary palliative care.

Material and methods:

Qualitative focus group study involving 52 health professionals from rural parts of Northern Norway. First, focus group discussions were performed with doctors and nurses separately, to allow „talking about the other”. Second, discussions or interviews with local teams of cooperating professionals took place in six purposively selected municipalities. Transcripts were analysed thematically.

Results:

We found that the ideal clinical cooperation between GPs and ONs could be characterized as a meeting between experts with complementary competences. While ONs are specialists and often experienced in palliation, they are dependent on doctors’ generalist competences for diagnostic reasoning and clinical judgments. However, ONs sometimes lacked timely advice from GPs, and could feel left alone with critically ill patients. Moreover, variations in GPs’ involvement in palliative care could sometimes lead to unequal treatment and unnecessary suffering for patients. To avoid this, some ONs bypassed GPs and contacted specialist palliative care directly. Traditional professional hierarchies was not a barrier to cooperation. GPs were highly respectful of ONs competences, while ONs were clear that the medical responsibility was with the doctor. However, we found significant barriers to cooperation, regarding how primary care was organized and paid for, leading to GPs lacking time for callbacks, meetings and joint home visits. We also found that ONs and GPs had different strategies for learning. While ONs belonged to a networking nursing collective aiming for continuous quality improvement, GPs’ learned mostly from their individual experience of caring for patients.

Conclusion

GPs could give ONs much of the crucial support and confirmation they need by applying their generalist competences. When planning for high quality teamwork in primary care, organizational barriers to cooperation and different cultures for learning need consideration.

Key words: Palliative care, general practice, interprofessional, teamwork.

OP031 Neighborhood socioeconomic characteristics and statin medication in patients with myocardial infarction: a Swedish nationwide follow-up study
Background:
Coronary heart disease (CHD) and myocardial infarction (MI) are associated with neighborhood-level socioeconomic status (SES). Statins are important drugs for secondary prevention of MI. However, no study has determined whether neighborhood-level SES is associated with statin medication in MI patients. We aimed to determine whether there is a difference in statin medication rate in MI patients across different levels of neighborhood SES.

Methods
All patients in Sweden, diagnosed with incident MI from January 1st, 2000 until December 31st 2010, were followed (n = 116,840). Of these, 89.7% received statin medication. Data were analyzed by multilevel logistic regression, with individual-level characteristics (age, marital status, family income, educational attainment, country of origin, urban/rural status and comorbidities/chronic conditions related to MI) as covariates.

Results
Low neighborhood-level SES was significantly associated with low statin medication rate (Odds Ratio 0.80). In the full model, which took into account individual-level socioeconomic characteristics and MI comorbidities, the odds no longer remained significant.

Conclusions
Individual-level approaches may be most important in health care policies regarding statin medication in MI patients.

OP032 Danish OEF personnel deployed in Afghanistan in 2013: Follow-up on mental health from prior to deployment until 2.5 years after homecoming

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3Danish OEF personnel deployed in Afghanistan in 2013: Follow-up on mental health from prior to deployment until 2.5 years after homecoming

Background.
Since 1992 Denmark has deployed >31,000 persons to war zones. Deployment increases risk of developing post-traumatic stress (PTS) disorder, depression and other mental illnesses which again increase health care use, affect employment status, and decrease quality of life. In a follow-up of Danish soldiers deployed to Afghanistan in 2009, prevalence of severe PTS-symptoms increased from 2.7% 2-3 months after to 9.7% 2.5 years after homecoming (Andersen et al. 2014). Longitudinal studies have found distinct PTS-symptom trajectories and various trajectory membership predictors. Identifying risk factors pre and early-post deployment is important for pre-deployment screening and post-deployment intervention targeting.

Objectives.
To examine the prevalence and trajectories of PTS-symptoms from pre-deployment through 2.5 years after homecoming.

Material/Methods.
Danish personnel deployed to Afghanistan in 2013 (N=659) completed questionnaires pre-deployment, 2-3 and 7-8 months, and 2.5 years after homecoming examining depression (DASS21) and PTS symptoms (the PTSD Checklist for DSM-IV, Civilian version (PCL-C)). Pre-deployment, questionnaires on socio-demographics and military experience, traumatic life events, attention-deficit/hyperactivity disorder symptoms, and symptoms of avoidance behavior and impulsive behavior were completed. Combat exposure and social support was assessed 2-3 months after homecoming. We modeled PTS-trajectories using latent growth mixture modeling (LGMM) and identified possible predictors of trajectory membership post hoc in a multivariate logistic regression.

Results.
The prevalence of severe PTS-symptoms increased over time. From <1% pre-deployment to 2.8% 7-8 months (p=0.0005, McNemar’s test) and 5.4% 2.5 years after homecoming (latter increase, p>0.05). Three PTS-trajectories were identified: almost 90% belonged to a low-stable trajectory, while 2% and 8% belonged to trajectories characterizing late onset of PTS-symptoms and symptom-fluctuation, respectively. Predictors of membership of symptomatic trajectories were pre-deployment depression symptoms and low social support after homecoming.

Conclusion.
The prevalence of severe PTS-symptoms increases from pre- to 2.5 years post-deployment. Three PTS symptom trajectories can be identified with the majority (90%) belonging to a low-stable trajectory. Importantly, 10% had varying degrees and fluctuations of symptomatology indicating mental health problems after homecoming. The study shows the importance of evaluating depression symptoms pre-deployment and promoting post-deployment social support in vulnerable veterans. This information is relevant to health care personnel and others around the veteran.

Keywords. Veterans, mental health symptoms, longitudinal studies.

OP033 The Non-acute Use of the ECG in Primary Health Care in Finland
Background
It is estimated that from 10% to 40% of laboratory tests are taken in vain. According to a Swedish study the total number of laboratory tests increased by over 70% in a seven-year period. A retrospective study in Finland showed that laboratory expenses increased by 12% between 2010 and 2013. The single most expensive laboratory test was an ECG due to a high volume and high operating cost. The six most common laboratory tests formed 25% of the laboratory expenses. The variation in the number of laboratory referrals among physicians was also high. ECG has not been proven to be beneficial in population screening and it is not recommended for routine follow-up of asymptomatic stable coronary heart disease patients. In Finland Current Care Guideline (CCG) for high blood pressure recommends controlling ECG for every 1 to 2 years. The Finnish CCG for chronic atrial fibrillation suggests controlling ECG ahead of each follow-up visit. Diabetes CCG suggests ECG control for every 1 to 3 years. Furthermore, health centres may have their own guidelines regarding ECG controls.

Objectives
The aim of the study is to analyse the use of ECG and local care practices regarding its use in non-acute situations in Finnish health centres. What is the variation in non-acute ECG referrals among practices and what kind of local guidelines exist?

Material/Methods
This is an on-going study. Primary care research network is a network of 24 Finnish health centres in the Tampere University Hospital area. 17 out of the 24 health centres participate in this study. During one month the number of non-acute ECGs per practice will be collected from the 17 network's health centres in Finland. Any acute and on call ECGs will be excluded. The number of visits and the rate of ECGs per visit in different age groups will be collected. The study will look into local care practices concerning the non-acute use of ECG, along with collecting background information regarding the characteristics of the health centres' personnel and population by a questionnaire. The data will be collected with the help of the health centres' contact persons.

Results
Preliminary results will be presented in the congress.

Conclusions
The practice variation in the number of ECGs and care practices will be assessed. The results could be used in the evaluation and management of the practices and in the development for further investigation.

Keywords: ECG, Electrocardiography, Laboratory test, Finland, Research network, Primary health care

OP034 Screening of obesity and interventions offered by school health care personnel during primary school - the gap between evidence-based clinical guidelines and reality

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Background
School health care is a natural setting for early detection of childhood obesity and offering personalized support for the child and family. Finnish school health care covers all children and emphasizes prevention. Annual health checks by school nurses, and school doctor visits twice during primary school enable detection of health risks including obesity. Clinical practice guidelines for childhood obesity assign primary health care as the main actor. Earlier studies have shown that childhood obesity is not screened effectively in primary care. However, this has not been confirmed in longitudinal settings in an unselected population.

Objectives
This study examines the overall efforts by school nurses and doctors in screening, diagnosing and treating obesity during the six primary school grades compared with national guidelines.

Methods
From a retrospective cohort of 2000 primary school 6th graders, 172 had been measured obese at least once during primary school. From electronic health records (EHR) of these 172 ‘ever obese’ children, we manually collected data on how effectively school nurses and doctors noted obesity, recorded the diagnosis or offered interventions during primary school.

Results
Of the 172 ever obese children, 85% had been in an annual nurse assessment at least five times. A school doctor did a first grader health check for 53% of the children and 93% had a doctor’s check in fifth grade. Extra visits to a school nurse due to overweight were held for 72% of the children. Of these, 94% took place without parents. Extra visits to a school doctor were arranged to 23%, parents being present in 48% of them.

Of the 172, 157 had become obese during the first five grades. Of them, 29% received an ICD-10 diagnosis for
obesity. However, school doctors mentioned obesity in EHR recordings for 90% of the children and, similarly, school nurses for 99%. A treatment plan was made for the majority at least once, but 28% were missing a concrete plan for nutrition, 31% for exercise and 90% for weight development. At least one treatment plan was made together with parents for 78%. We also observed that 17% received a referral to a dietitian, 31% to a family centred group treatment program and 5% to specialised care.

**Conclusion**

School doctors refrain from diagnosing obesity. More often doctors and nurses observe it and offer plans for follow up. However, children are mostly alone in weight related visits and treatment plans are often partial and made without the parents. Although clinical guidelines emphasize the parents’ role and school health care aims to be family centred, obesity treatment could do better in this area.

**Keywords**

Electronic health records, intervention, paediatric obesity, primary school, school health care, screening

**OP035 Prevalence of overweight and thinness in a multi-ethnic cohort of 4 years old children in Norway. Associations with ethnicity, maternal- and early life factors**

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**Background:**

Metabolic diseases in adults affect ethnic groups disproportionally. Early life overweight (here including obesity) and thinness are both risk factors for metabolic diseases in later life.

**Objectives:**

To investigate ethnic differences in overweight and thinness in a multi-ethnic, population-based cohort of 4 years old children in Norway, and associations with maternal and child early postnatal factors.

**Material / Methods:**

Data were drawn from a Norwegian multi-ethnic cohort of healthy pregnant women (STORK Groruddalen study) and their offspring (n=606). We compared 3 ethnic groups: European (n=298), Asian (n=190), and Middle East / North African (n=118). Weight status was defined by The extended international (IOTF) body mass index cut-offs, which links BMI values at 18 years (18.5, 25 and 30 kg/m²) to child centiles for grade 1 thinness, overweight and obesity. We performed logistic regression analysis to find associations between ethnic origin and the outcomes overweight and grade 1 thinness at age 4 years, adjusting for prenatal factors, birth outcomes and postnatal factors.

**Results:**

Compared to the European children (12.8%), the prevalence of overweight was higher (p=0.02) in the ethnic Middle East / North African (22.0%), and lower (p=0.003) in the Asian children (4.7%). Logistic regression analysis showed that Middle East/North African origin doubled the risk of being overweight (OR 2.3; 95% CI: 1.17-3.89). Birthweight (pr. 100g; OR: 1.12; 95% CI: 1.06-1.18) and prepregnant maternal overweight (kg/m²; OR 2.53; 95% CI: 1.44-4.43) were independently associated with overweight at 4 years. There were more overweight girls than boys (OR 1.72; 95% CI: 0.996-2.96), but this was only borderline significant. In contrast, compared to European children (10.4%), the prevalence of thinness was higher in children with Asian background (24.2%, p<0.001), but not significantly different in Middle East / North African children (12.7%). Asian origin almost doubled the risk of being categorized as thin (OR 1.91; 95% CI: 1.12-3.26). Birthweight (pr. 100g; OR: 0.96; 95% CI: 0.91-0.99) and prepregnant maternal overweight (kg/m²; OR 0.54; 95% CI: 0.30-0.95) were independently negatively associated with thinness at 4 years.

**Conclusion:**

Compared to European children, Middle East/North African origin doubled the risk of being overweight, while Asian origin almost doubled the risk of being categorized as thin. Birthweight and prepregnant maternal overweight were strongly associated with overweight (positively) and thinness (negatively) at age 4 years.

**OP036 Vitamin D levels during pregnancy and associations with birth weight and body composition of the newborn: a longitudinal multiethnic population-based study.**

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**Objective:**

We investigated associations between serum-25-hydroxyvitamin D [25(OH)D] in pregnancy and birth weight and other neonatal anthropometric measures.

**Material/Methods;**
Population-based, multiethnic cohort study of 823 pregnant women (59% ethnic minorities) attending the Child Health Clinics for antenatal care in Oslo, Norway and their offspring. Birth weight of 719 singleton neonates born at ≥37 weeks was measured, including study representative measurements of crown-heel length, head circumference, abdominal circumference, mid-upper-arm circumference and skinfold thickness. At gestational weeks (GW) 15 and 28, maternal 25(OH)D was measured. Ethnicity was categorized according to maternal country of birth and information about a range of explanatory factors (maternal age, parity, educational level, pre-pregnancy BMI, season, gestational age, neonate gender) was collected. Women with 25(OH)D <37 nmol/L at GW 15 were recommended vitamin D₃ supplementation. Maternal 25(OH)D was categorized in four groups: consistently deficient (<37 nmol/L at GW 15 and 28), consistently sufficient (≥37 nmol/L at GW 15 and 28), increasing (<37 nmol/L at GW 15 and ≥37 nmol/L at GW 28) and decreasing (≥37 nmol/L at GW 15 and <37 nmol/L at GW 28). Separate linear regression analyses were performed to model the associations between 25(OH)D and each of the outcomes: birth weight, crown-heel length, head circumference, abdominal circumference, sum of skin folds, mid-upper-arm circumference and ponderal index.

Results:
In early pregnancy, 51% of the women had 25(OH)D <50 nmol/L. High prevalence of severe deficiency (25(OH)D <25 nmol/L) was found in women from Asia and the Middle East. In univariate analyses maternal 25(OH)D in early pregnancy was significantly (p<0.05 for all) associated with birth weight, crown-heel length, head circumference, abdominal circumference and ponderal index. After adjusting for maternal age, parity, educational level, pre-pregnancy BMI, season, gestational age and neonate gender, 25(OH)D was still associated with birth weight, head circumference, abdominal circumference and ponderal index. However, after adjusting for ethnicity, 25(OH)D was no longer associated with any of the outcomes. The same was found for those with consistently deficient and consistently sufficient 25(OH)D, and for those which had an increase or decrease in 25(OH)D during pregnancy.

Conclusions:
Maternal 25(OH)D in gestational week 15 and 28 is not associated with birth weight, crown-heel length, head circumference, abdominal circumference, sum of skin folds, mid-upper-arm circumference or ponderal index after adjusting for ethnicity. Supported by the Norwegian Research Fund for General Practice.

OP037 Does Training and Support of GPs in Intensive Treatment of People with Screen-Detected Diabetes Improve Medication, Morbidity and Mortality in People with Clinically-Diagnosed Diabetes?

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Introduction
Very few studies have examined the potential spill-over effect of a trial intervention in general practice. We investigated whether training and support of general practitioners in the intensive treatment of people with screen-detected diabetes improved rates of redeemed medication, morbidity and mortality in people with clinically-diagnosed diabetes.

Methods.
This is a secondary, post-hoc, register-based analysis linked to a cluster randomised trial. In the ADDITION-Denmark trial, 175 general practices were cluster randomised (i) to routine care, or (ii) to receive training and support in intensive multifactorial treatment of individuals with screen-detected diabetes (2001 to 2009). Using national registers we identified all individuals who were diagnosed with clinically incident diabetes in the same practices over the same time period. (Patients participating in the ADDITION trial were excluded). We compared rates of redeemed medication, a cardiovascular composite endpoint, and all-cause mortality between the routine care and intensive treatment groups.

Results
In total, 4,107 individuals were diagnosed with clinically incident diabetes in ADDITION-Denmark practices between 2001 and 2009 (2,051 in the routine care group and 2,056 in the intensive treatment group). There were large and significant increases in the proportion of patients redeeming cardio-protective medication in both treatment groups during follow-up. After a median of seven years of follow-up, there was no difference in the incidence of a composite cardiovascular endpoint (HR 1.15, 95% CI 0.95 to 1.38) or all-cause mortality between the two groups (HR 1.08, 95% CI 0.94 to 1.23).

Discussion
There was no evidence of a spill-over effect from an intervention promoting intensive treatment of people with screen-detected diabetes to those with clinically-diagnosed diabetes. Overall, the proportion of patients redeeming cardio-protective medication during follow-up was similar in both groups.

OP038 Assessing the behaviours, preferences and beliefs of parents/guardians with children under the age
of six years in relation to seeking medical information online for their child.

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Background
Use of the internet for medical information has expanded rapidly in recent years with various sources from national bodies to online communities now available to parents/guardians. Moreover in 2016, Google with the Mayo Clinic and Harvard Medical School launched a new information system for symptom related queries which comprise of 1% of all their searches.

Objectives
This study aims to assess the behaviours, preferences and beliefs of parents/guardians of children under the age of 6 in relation to the use of the internet for medical information if their child was unwell.

Method
Questionnaires were offered to parents/guardians of children under the age of 6 attending at two primary care centres in suburban Dublin. 195 surveys were completed. A literature review was also completed in relation to parent/guardian use of the internet for medical information. Results 195 surveys were completed. 66.3% had used the internet in the last 12 months for medical information – of those the frequency was as follows over that period; 1-4 times – 70.1%, 5-9 times – 22.6%, 10-15 times – 2.4% & 15+ times – 4.9%. Parents/guardians were asked their likelihood of seeking an appointment with their GP after going online for medical advice: 1.9% „Very Less Likely‟, 18.5% „Less Likely‟, 51.1% „Neutral‟, 25.9% „More Likely“ & 2.6% „Highly More Likely“. On Likert scales opinions on the importance of various characteristics of online information were sought (1=„Very Unimportant‟ to 5=„Very Important‟); 1) Recommended by General Practitioner (GP)/nurse/midwife (4.18), 2) National health department source (3.87), 3) Evidence / research based information (3.82), 4) Ranked highly on Google (3.09) & 5) Online community/forum of peers (3.03). Those more likely to discuss information found online with their GP were those who used the internet for medical advice more often (15+ compared to 1-4 & 5-9 times a year) (p=0.006 & 0.010). Also more likely to discuss were those who gave a higher importance to online information recommendations from a GP/nurse/midwife (p=0.000) & online community/forums (p=0.007). The most frequent users of online medical information (15+ times a year) gave higher importance to information that was from the national health department (p=0.034) or was recommended by a GP/nurse/midwife (p=0.035) compared to those with only occasional use (1-4 times a year).

Conclusion
The use of the internet for medical advice for children under the age of 6 by parents/guardians is high. The highest level of importance was given by patients to information on sources recommended by their GP/nurse/midwife. The evidence of a therapeutic relationship between GP‟s and parents/guardians which embraces digital augmentation of information is strong.

References: 1. goo.gl/L9wt2q

OP039 Documentation of medical work in nurses level - the bases for teamwork-continuity in Family Medicine Center.

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Background
Family nurses and doctors work side by side in Estonian Family Medicine Centers as teams. Different medical situations belong into family nurses competencies - f.ex. they are counselling patients with chronic diseases, measure INR and take lab- tests, deal with wounds, verrucas and naevi, handle patients after operative treatment etc. Different nurses may see the patient within the same condition in different times, thats why it is very important to documentate the findings and decisions in understandable way. We use electronic patientfiles.

Objectives
Patient files should consist different important information, we concentrated in medical information - existence of anamnese, objective findings, decisions and follow-up necessity. Existence of this information saves time for next handler (teamwork on nurses level and also with doctors) and makes easier to follow the change in patients condition.

Method
We choosed the inside - auditing, 5 nurses auditted retrospectively their collegues 2 days work with patients by analyzing the documentation in electronic patient files.
We used excel - files for every auditor with five questions about every patient - documentation:Do You find in the documented file the next contents:’ 1. Complains2. Description of objective findings3. Decision or action made by nurse 4. What happens next? 5. Can You take the patient over on bases of documented information without asking additional questions?

Results
We gathered together to discuss the results, to find the success and missingpoints. Nurses audited 98 patient files
and 48 of them (48.9%) were documented properly. It means that half of the documentation was completely well done. 5 files (5.1%) were missing totally (possible, that the patient did not come, but was not rejected in registration - files). In analysed files - the decision or action by nurse was missing in 24% of files. The objective findings were not documented in 20% of files and surprisingly the reason for patient to come was missing in 16.3% of files. Of course, sometimes it is adumbrative, but still there are ways to prove the documentation - process for everybody to understand it.

**Conclusion**

Audit by colleagues gives the feedback from the person of knowing the task and doing the same work every day. It also gives the good possibility for self - analyse. The understanding of contents of medical file will help not to forget the easily missing parts (decision, follow-up etc). If we do things in the same way, it reduces the disarrangement and saves time, also emphasizes teamwork in FMC.

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**OP040 Data collection by traditional paper questionnaires versus web-based questionnaires sent to online digital mailbox: differences in response rate, costs and quality of answers.**

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**Background:**

Paper questionnaires have so far been the first choice for collecting data. However, response rates have declined over the last decade, thus increasing the risk of selection bias in cross-sectional studies. Growing use of the internet offers an obvious way of collecting data, but trials using web-based questionnaires have seen mixed results. In 2014 it became mandatory for Danish citizens to have an online digital mailbox (digital post) linked to their civil registration number. Correspondence with public authorities happens only through this mailbox. 89% of the Danish population have a digital mail box and exemption is only possible for a few well-defined reasons.

**Objectives:**

To compare response rates, costs, and quality of answers between data collection using traditional post or digital post.

**Methods:**

Cross-sectional comparative study. We sent a questionnaire regarding citizens’ help-seeking behaviour towards out-of-hours care to two groups of 3,600 random citizens from three age groups using either paper post or digital post. Costs per respondent were measured adding up all costs for handling, shipping, printing and work salary, and dividing them by the number of respondents. Quality of answers was assessed by comparing number of missing values, text in the margins and text in voluntary comments fields in the questionnaires.

**Results:**

Response rates were 36.3% for digital post and 46.0% for paper post. The costs were 1.51 €/respondent for digital post and 15.67 €/respondent for paper post. Preliminary results for quality of answers indicated that web-based questionnaires have significantly fewer missing values than paper questionnaires. We intend to compare background data from the non-responders.

**Conclusions:**

Although resulting in lower response rates, the digital solution provided responses of higher quality at lower costs. Analysis of non-responders will enable us to assess potential selection bias as a result of lower response rates. Final results may enable us to make a recommendation regarding the future use of digital post in questionnaire studies.

**Key words:** Questionnaire, Response Rates, Selection Bias, Digital Post, Cost Analysis

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**OP041 Certification of sickness by patients with mental complaints - Qualitative research of the antinomies and conflicts of GP’s daily practice**

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**Background**

Studies have shown that mental illness is increasingly the reason for certification of paid sick leave. Additionally, the number of early retirements as a consequence of mental illness in Germany has increased significantly in recent years. These phenomena are also existent in Brazil. Other studies have examined the relationship of modern compressed professional life and mental complaints. There have been few studies investigating which effects this relationship has on the occupational routine of a family practice. Family doctors experience tension in their professional conduct both as advocate for the patient and as service providers and experts. Family doctors acting with patients with mental complaints find themselves in tension between the singular case and reference to social systems. They are confronted with conflicts of objectives and
antinomies e.g. the patient’s interest to get rest and the societal interest of a quick reentry into working life.

**Objectives**

We investigated the different roles of GPs (lawyer, expert, service provider) on different levels (case coverage, system reference, mediator between case and system reference) and their possible target conflicts. We are interested in dilemmas and conflicting interests in the complex interplay between the concerns of the individual patient and the various systemic references (social insurance, the labor market, the bio-psycho-socio-economic situation of the patient)

**Material/Methods**

Grounded Theory: semi-structured themed interviews with GPs (up to now 25) about the daily professional medical practice in concrete case studies; Circular coding; Interpretation of the text material to develop typical case vignettes to illustrate the conflicts an antinomies.

**Results**

First case studies will be presented, which demonstrate the conflicts of goals of professional daily work from the perspective of relation orientated, socio-medical and sociological perspectives. Intermediate results show the complex challenges faced by Gps ‘daily practice in the face of a changing society.

**Conclusion**

The interviews and the case vignettes demonstrate the subjective professions’ perception of the physicians and how this affects their case management. It shows the complexity of the everyday challenges in general practice, which requires a high level of professionalism and self-reflectivity.

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**OP042 Effective behaviour change techniques for physical activity and healthy eating in obese adults; systematic review and meta-regression analyses**

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**Purpose**

By examining differential effects of behaviour change techniques (BCTs) and other intervention characteristics this systematic review aimed to explain the heterogeneity in results of randomized controlled trials (RCTs) of interventions to promote physical activity and healthy eating for obese adults.

**Methods**

The inclusion criteria specified RCTs with ≥ 12 weeks’ duration, from January 2007 to October 2014, for adults (mean age ≥ 40 years, mean BMI ≥ 30). Databases, reviews and journals were searched using a pre-specified search strategy. Primary outcomes were objective and/or self-reported measures of diet and/or physical activity. Two reviewers rated study quality, coded the BCTs using the Behaviour Change Techniques Taxonomy version 1, and collected outcome results at short (< 6 months) and long term (≥ 12 months). Meta-analyses and meta-regressions were used to estimate effect sizes (ES), heterogeneity indices (I²) and regression coefficients.

**Results**

We included 48 studies containing 82 physical activity and diet outcome reports. Fifty were short term reports. Long term reports had an overall ES = 0.24 with 95% confidence interval (CI): 0.15 to 0.33 and I² = 59.4%. Short term reports had an ES = 0.37 with 95% CI: 0.26 to 0.48, and I² = 71.3%. The number of additionally added BCTs in the intervention arms and the BCTs goal setting and self-monitoring of behaviour significantly predicted the treatment effect at both short and long term. Total number of BCTs and using goal setting of outcome, feedback on outcome of behaviour, implementing graded tasks, and adding objects to the environment significantly predicted treatment effect at long term. Goal setting of behaviour and the presence of reporting bias explained 58.8 % of inter-study variation at short term. Autonomy supportive and person-centred methods as in Motivational Interviewing and Self-Determination theory-based interventions, goal setting of behaviour and receiving feedback on the outcome of behaviour, explained all of the between study variations in effects at long term.

**Conclusion**

The results support the use of BCTs facilitating behaviour self-regulation, e.g. goal setting and feedback on outcome of behaviour. A client-centred and autonomy supportive approach seems important in order to maintain behaviour change over time.

**Keywords** Systematic review, behaviour change techniques, healthy eating, physical activity, meta-regression, heterogeneity, self-regulation

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**OP043 Home blood pressure in primary care**

Gabor Szalo1, Björn Landström2
Background
Hypertension is a common disease in Sweden. The most of the patients are controlled by office blood pressure (BP) (1). Our project group work with home BP monitoring. This method can reduce amount of patient with white-coat hypertension and masked hypertension. Guideline from European Society of Hypertension and European Society of Cardiology (ESH/ESC) (2013) shows that home BP is more closely related to hypertension-induced organ damage than office BP. Recent meta-analyses indicate that the prediction of cardiovascular morbidity and mortality is significantly better with home BP than with office BP (2).

Objective
Identify patient with white-coat hypertension and thus reduce medication. Inclusions criteria are patients with high normal BP and hypertension. Exclusions criteria are arrhythmia, malign hypertension, unmotivated patients.

Method
The patients borrow an oscillometric automatic sphygmomanometer and take BP two times/day, on at least 3 days. The results are reported in a standardized logbook. Home BP is the average of these readings, with exclusion of the first monitoring day. We use ESH/ESC guideline for evaluation of blood pressure. Our project is a pilot study. We are in the planning phase. All of the preparations are ready (project plan, license from director, approval from patients, instructions and logbook for patients).

Results
Patient care has going on since January 2016. Some patients has used this method. All have completed our program.

Conclusion
Local guideline for out-of-office blood pressure has not existed in our region before our study. Our aim is to start with home blood pressure monitoring which is a safer method for blood pressure control than office blood pressure. Blood pressure monitoring is going to be more effective and controlled. Our target is overmedication. Health education is included in our program. Our expectation is that it can improve patient involvement and health awareness.


OP044 Self-rated fitness and socioeconomic factors in detecting undiagnosed Type 2 diabetes - The Danish General Suburban Population Study
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Background:
To investigate the association between self-rated socio-economic status (SES) and fitness in comparison to established risk factors for undiagnosed type 2 Diabetes Mellitus (T2DM). Moreover, the study aims to develop a simple self-assessment score, Zealand Risk Score (ZRS) and compare this to other relevant alternatives: Leicester Risk Assessment Score (LRAS), Finnish Diabetes Risk Score (FINDRISC) and the validated Danish Diabetes Risk Score (DDRS).

Methods:
Cross sectional study of 21,205 adult participants. We used relative importance calculations to estimate the predictive value of the variables considered and constructed a risk equation model, the ZRS, using multivariate logistic regression. The predictive variables examined, were self-assessed: ethnicity, age, sex, history of cardiovascular disease, hypertension, treatment with cholesterol lowering and antihypertensive medication, smoking status, fitness, family history of DM, physical activity, vegetables and fruit in diet, waist circumference, BMI, civil status, education, income and occupation. The outcome was undiagnosed T2DM using HbA1c ≥ 48mmol/l and pre-diabetes using HbA1c ≥ 42-47mmol/l. The ZRS was 2-fold cross-validated in the latter of a randomized division of the material. Lastly, we compared the developed ZRS and sought external validation to LRAS, FINDRISC and DDTRS.

Results:
More than 20% of participants with T2DM were undiagnosed. These had less often been in contact with their GP, OR of 0.69 (0.52; 0.92) and had more often been admitted to hospital OR of 1.69 (1.21 ; 2.34) in the last 12 months, adjusted for age and gender. Low education level was associated with a higher risk of undiagnosed T2DM, OR of 2.51 (1.76; 3.59). Poor self-rated fitness predicted a high risk of undiagnosed T2DM, only high BMI, high age, family disposition for DM and hypertensive therapy was more important risk factors. ZRS seems efficient in prediction of undiagnosed T2DM with and AUC of 78.9 and better compared to the validated DDTRS (p=0.003). Including level of education in the risk-score did not improve the model (p=0.34). The LRSA is equal to DDTRS, even in a less multiethnic community, while FINDRISC preforms less well (p<0.0001). FINDRISC preformed less well also in the case for prediction of pre-DM.
Conclusions:
Self-rated fitness and level of education seems important in conjunction to established risk factors in prediction of undiagnosed T2DM. The ZRS seems efficient in prediction of undiagnosed T2DM compared to prior validated scores, DDRS and LRAS, while FINDRISC preforms less well.

OP045 Morbidity and mortality in persons participating in the Ebeltoft Health Promotion Project - a 22-year follow-up study

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Background
It is argued that general health checks in adults do not reduce the morbidity and mortality from disease. However, effects of general health checks are often estimated on the basis of comparisons with control groups living in the same area, thus leaving a possibility of contamination/spillover effect from the intervention groups.

Objectives
The objective of this study was to investigate somatic and psychiatric morbidity and mortality in persons from intervention and control groups in the Ebeltoft Health Promotion Project (EHPP) and to use the remaining age-matched Danish population as a control group.

Material/Methods
The study population included 3464 people aged 30-50 years living in the Danish town of Ebeltoft in 1991. In total, 2000 persons were invited and randomized to two intervention groups and one internal control group; 1507 (75%) accepted the invitation. The members in one intervention group received an invitation to a 45-minute long health conversation with their general practitioner (GP), whereas the members in the other intervention group were asked to contact their GP and request a normal consultation. Finally, 1464 were randomized to an external control group and were not contacted in 1991. Furthermore, 950 persons from the rest of the Aarhus region were selected to form an external control group living outside the Ebeltoft region. They received the same questionnaire as people randomized to the EHPP.

Somatic and psychiatric morbidity as well as mortality in the above mentioned groups will be compared with the remaining part of the Danish population in 22 years of follow-up.

First events will be analyzed by Cox regression. Recurrent events will be analyzed by negative binomial regression. Crude estimates and estimates adjusted for gender, age, income, education, ethnicity, being married, number of persons in the household, and Charlson Comorbidity Index scores will be presented.

Results
The results will be presented as tables describing the populations and showing crude and adjusted estimates of hazards ratios (first events) and incidence rate ratios (recurrent events).

Conclusion
The results will indicate if the EHPP has been contaminated.

OP046 Boon or bane? arriba® PSA: A new decision-aid to support the PSA-screening counseling

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Background
The value of PSA-screening for prostate cancer is a matter of current debate. Nevertheless experts agree on the fact that patients need to be informed about risks, benefits and consequences prior to testing. Evidence-based decision-aids (DAs) are able to support the counseling process and increase decision quality. We developed the DA arriba® PSA, which has already been tested in qualitative pre-studies.

Research question
Is counseling with the DA arriba® PSA superior compared to counseling without a DA regarding the decisional conflict and the degree of information?

Methods
A cluster-randomized, controlled trial was performed, involving 28 general practitioners who consecutively recruited 169 patients. GPs were randomized to either apply (n = 75) or not apply the DA (n=94; „as usual“). Participants filled in questionnaires regarding their current decision, decision quality and -process. Main outcomes are the degree of information and the decisional conflict, measured by the decisional conflict scale (DCS).

Results
arriba® PSA is associated with a higher degree of information. The scores in the DCS are low in both groups and
there are no significant differences to be found.  

Conclusion  
More information might allow for a better decision regarding the decision for or against PSA screening. The DA is applicable in daily practice and might contribute to neutral counseling based on the best available evidence.  

OP047 Why do some colorectal cancer screening participants choose not to undergo colonoscopy following a positive test result?  
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Introduction:  
Colorectal cancer (CRC) is one of the most common cancer types in high-income countries with a high mortality rate. Therefore, a national CRC screening programme was implemented in Denmark in 2014 using an immunological faecal test (iFOBT) as the screening test. During the first 10 months of screening 64% of the invited citizens chose to participate and 6.8% of those received a positive result. The participants having a positive screening test were offered a colonoscopy with 85% accepting this invitation. Of the remaining 15% approximately 5% were already diagnosed with inflammatory bowel disease, 5% suffered from severe multimorbidity and were not eligible for a colonoscopy and the last 5% chose not to undergo the procedure for other reasons.

So far it has not been possible to identify studies investigating why some screening participants choose to refrain from undergoing a colonoscopy after they have been tested positive and therefore have an increased risk of having CRC.

Aim:  
The aim of this study was to investigate why participants opted out of the colonoscopy following a positive screening iFOBT result.

Methods:  
We conducted semi-structured, qualitative interviews. The interviews were conducted in face-to-face or by telephone, and were audio-recorded and transcribed. The interview data was read and coded using Strauss and Corbin’s (1998) concept of open-, axial- and selective coding, which identified core themes, generally shared in all interviews, forming the basis of the findings section.

Results and Conclusions:  
Twelve of 75 invited informants accepted to be interviewed and saturation of data was achieved after the 12th interview. Thirty-eight different reasons were given, and nine categories were identified: Practical barriers, Not having the energy to cope with illness, Afraid of complications, Vanity, Comorbidity, Feeling healthy, Not identifying oneself with being in a high-risk group, Distrust in the accuracy of the iFOBT, Discomfort of the colonoscopy and/or cleansing. These findings suggest that some practical barriers can already be overcome and that further research is needed in order to examine how the different reasons are represented in the population. Furthermore, it should be explored why persons who refuses a colonoscopy, accepts participation in the CRC screening programme in the first place.

OP049 Country of origin and bariatric surgery in Sweden during 2001-2010  
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BACKGROUND:  
The prevalence of obesity, as well as use of bariatric surgery, has increased worldwide.

OBJECTIVES:  
The aim of the present study was to investigate the potential differences in the use of bariatric surgery among Swedes and immigrants in Sweden and whether the hypothesized differences remain after adjustment for socioeconomic factors.

Material/METHODS:  
A closed cohort of all individuals aged 20-64 years was followed during 2001-2010. Further analyses were performed in 2 periods separately (2001-2005 and 2006-2010). Age-standardized cumulative incidence rates (CR) of bariatric surgery were compared between Swedes and immigrants considering individual variables. Cox proportional hazards models were used in univariate and multivariate models for males and females.  

RESULTS:  
A total of 12,791 Swedes and 2060 immigrants underwent bariatric surgery. The lowest rates of bariatric surgery were found in immigrant men. The largest difference in CR between Swedes and immigrants was observed among low-income individuals (3.4 and 2.3 per 1000 individuals, respectively). Adjusted hazard ratios (HRs) were lower for
all immigrants compared with Swedes in the second period. The highest HRs were observed among immigrants from Chile and Lebanon and the lowest among immigrants from Bosnia. Except for Nordic countries, immigrants from all other European countries had a lower HR compared with Swedes.

CONCLUSIONS:
Men in general and some immigrant groups had a lower HR of bariatric surgery. Moreover, the difference between Swedes and immigrants was more pronounced in individuals with low socioeconomic status (income). It is unclear if underlying barriers to receive bariatric surgery are due to patients’ preferences/lack of knowledge or healthcare structures. Future studies are needed to examine potential causes behind these differences.

KEYWORDS: Bariatric surgery; Country of origin; Immigrants; Obesity; Socioeconomic status

OP050 Socio-demographic factors and long-term use of benzodiazepines in patients with depression, anxiety or insomnia

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Background:
Former studies that have attempted to characterize individual socio-demographic factors associated with long-term benzodiazepine use were based on relatively small sample sizes and/or self-reported data. Former studies have shown that there is a considerable variation in prescription patterns between health care centres.

Objectives:
Our aim was to clarify long-term benzodiazepine use in relation to socio-demographic factors using large-scale primary health care data from Sweden. We also examined how much of the total variation in long-term use of benzodiazepines could be attributed to the primary health care centres.

Material/Methods:
The present study covered 71 primary health care centres containing individual-level data from a total of 919,941 individuals who visited a primary health care centre (PHCC) during the period 2001-2007. From this database we selected individuals 25 years or older with depression, anxiety and/or insomnia who were prescribed a benzodiazepine within 0-90 as well as 91-270 days after their first clinical diagnosis of depression, anxiety and/or insomnia.

Results:
High age (OR, 2.92, 95% CI, 2.28-3.84), middle SES (OR, 1.22, 95% CI, 1.08-1.38), being on social welfare (OR, 1.40, 95% CI, 1.23-1.62) and not being married were associated with higher long-term benzodiazepine use. The PHCCs only explained a small part of the individual variation in long-term benzodiazepine use.

Conclusions:
Awareness of the impact on long-term benzodiazepine use of certain individual-level socio-demographic factors is important for health care workers and decision-makers who should aim at targeting general interventions at all primary health care centres.

OP051 The effects of climate change on health.
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WHO expect that climate change will be the biggest health challenge in the 20th century. This is the world famous updated powerpoint presentation by mr. Al Gore with focuses on the effects by climate change on health, presented by undersigned as surrogate. Global Warming due to pollution with Carbon dioxide and other greenhouse gasses is causing rapid climate change. This is ultimately a health problem as extreme weather events due to global warming is a health hazard with many direct and indirect effects. The effects include more drought, famine, more wildfires, more storms, more extreme downpour, rising sealevel and ocean acidification, spreading of vectorborne and infectious diseases. This Presentation will give an accurate and in dept update on the effects from climate change and the path ahead with threats and possibilities. The focus is on climate change and health, based on the work by WHO / WMO, Lancet Commission and more.

OP052 How do general practitioners implement decision-making regarding COPD patients with exacerbations? An international focus group study.
Background:
Exacerbations of chronic obstructive pulmonary disease (COPD) account for loss of health-related quality of life and great health costs. Early and optimal treatment in primary care is crucial to reduce the illness’ severity and costly hospitalizations. Antibiotics and oral corticosteroids are frequently used treatment options, yet the benefit of these medications for outpatients is yet inconclusive. Due to the gatekeeper function of general practitioners (GPs) in many countries, their decisions play a key role in determining the further management of COPD patients with exacerbations.

Objectives:
To explore the decision-making of GPs concerning treatment with antibiotics and/or oral corticosteroids and hospitalization for COPD patients with exacerbations.

Material/Methods:
Thematic analysis of seven focus groups with 53 general practitioners from urban and rural areas in Norway, Germany, Wales, Poland, Russia, The Netherlands and Hong Kong.

Results:
The GPs aimed to make clear medical decisions and avoid unnecessary prescriptions and hospitalizations, yet this was challenged by uncertainty regarding the severity of the exacerbations and concerns about overlooking comorbidities. Contextual knowledge about the individual patient provided a supplementary framework to biomedical knowledge, allowing for more differentiated decision-making. Moreover, the GPs considered patients’ experiential knowledge about their own body and illness as valuable in assisting their decision-making, yet felt that dealing with disagreements between their own and their patients’ perceptions concerning the need for treatment or hospitalization could be difficult. Both formal and informal caregivers and organizational aspects of the health systems influenced the decision-making, particularly in terms of mitigating potentially severe consequences of ‘wrong decisions’, and concerning the negotiation of responsibilities.

Conclusion:
Fear of the consequences of ‘wrong’ decisions emerged as one main driver of GPs’ management decisions. GPs consider a holistic understanding of illness and the patients’ own judgment crucial to making reasonable decisions under medical uncertainty. Moreover, GPs’ decisions depend on the availability and reliability of other formal and informal carers, and the healthcare systems’ organizational and cultural code of conduct. Strengthening the collaboration between GPs, other outpatient care facilities and the patients’ social network can ensure ongoing monitoring and prompt intervention if necessary and may help to improve primary care for COPD patients with exacerbations.

OP053 Can we predict complicated grief in bereaved family caregivers? A nation-wide prospective cohort study

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Objective:
The death of a close relative cause grief in the family caregivers. A substantial number of family caregivers develop complicated grief, a condition with pervasive and intense grief symptoms that severely impacts daily life more than six months after the death. Knowledge of predictors of complicated grief may improve health professionals’ possibility to support vulnerable family caregivers and alleviate their grief reaction. The aim of this prospective study was to investigate predictors for complicated grief in bereaved caregivers.

Methods:
All 9,512 eligible adult patients receiving drug reimbursement for terminal illness in Denmark in 2012 were mailed a questionnaire and requested to pass it on to their closest relative. Family caregivers who were bereaved within six months after responding were sent a follow-up questionnaire six months after the loss. Complicated grief was assessed with the 13-item Prolonged Grief-13 scale. The following predictors were considered: age, gender, relation, educational level, symptoms of grief before the patient’s death, depressive symptoms before death,
caregiver burden, preparedness for the impending death and communication in the family about illness and death. Predictors were analysed in an adjusted logistic regression model.

**Results:**
At baseline, participants comprised 3,635 caregivers (response 38%) and 2,420 family caregivers were bereaved within six months. At follow-up, 2,215 bereaved caregivers participated (response 88%) and 1,989 completed a complicated grief scale. Spousal relation (OR=2.0 (1.2-3.6)), low education (OR=2.2 (1.1-4.2)), pre-loss grief (OR=3.8 (2.3-6.0)) and pre-loss depression (OR=5.9 (3.7-9.6)) were independent predictors of complicated grief.

**Conclusions:**
Health professionals should be aware that spousal relation, low socio-economic position, severe symptoms of grief and depression during caregiving can predict complicated grief. Identification of caregivers at risk of developing complicated grief is important, and during palliative care trajectories, GPs have a convenient possibility to identify these caregivers and initiate targeted interventions to alleviate severe grief reactions.

**Funding:** The Danish Cancer Society, Trygfonden and Helsefonden

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**OP054 A Doctor in the School - Nuisance or Necessity**

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**Background**
Adolescent school drop-out levels in Norway have been shown to be approx. 6%/year, resulting in reduced job opportunities, shorter life expectancy, increased social service expenditure (1-3 mill NOK/dropout). While self-registration by 10000 participants in „Young in Trondheim“ (2013) showed that 70% of adolescents were optimistic for their futures, 22% reported self-injury, 8% reported attempted suicide, and 5% reported prostitution. Statistics Norway reports that only 13% of depressed youths contact their family doctor. Family doctors collaboration with the school and the school health services has been reported to be less than 0,5 %. Public health nurses run the school health service, School doctors are scarce. Could a new model for school health service improve matters?

**Objectives**
The aims of the project were to: Establish health promotion schemes in the school curriculum Enable early detection and treatment of adolescent mental health problems Reduce the number of school drop-outs

**Materials and methods**
The project was implemented in 2015-2017 at Strinda secondary school, Trondheim, with 1100 students. School nurse presence was increased from 4 to 5 days/week and a school doctor service 1 day/week was established offering both planned and ad hoc consultations with pupils/parents. Referrals to relevant family doctors and second level health services was done without delay. Regular and ad hoc meetings with student services, administrative and teaching staff, individual teachers and student leaders were established, in addition to class visits to discuss mental and sexual health issues.
A low-threshold drop-in clinic manned by a public health nurse and a doctor was established at the school one afternoon/week.

**Results**
Drop-outs from Strinda in 2015/2016 was 30-50% less than that of comparable schools. The doctor had 40-50 consults/year; 67% with mental health issues, 17% of the total were referred to higher-level psychiatric care. Twenty percent were referred to their family doctors. The afternoon drop-in clinic received 120 pupils in 2015/2016: 50% with sexual problems; 10% were referred on to their own family doctors.

**Conclusions**
Adolescents with mental health issues tend not to use their family doctors. Family doctors rarely contact the school and the school health services regarding adolescents. The school is a good arena for detecting depressed adolescents and providing appropriate help. The school doctor can help the young people to get in touch with their family doctors and/or adequate treatment facilities. The presence of a school doctor may ultimately contribute to reducing the number of school drop-outs.

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**OP055 Continuity of care among patients referred to somatic rehabilitation - a patient survey using a Norwegian version of Nijmegen Continuity Questionnaire**

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**Background**
The personal doctoring is considered a core element in general practice. Over time, the concept of continuity of care has broadened from a focus on personal continuity with one caregiver, towards personal relations to more caregivers, and coordination of healthcare.

**Objectives**

To assess the patients' experience of continue of care regarding GPs and the most important specialist and continuity between these services.

**Methods**

Among patients referred to specialised somatic rehabilitation in Western Norway 985 patients responded (response rate 33.8%) to a survey collecting information about health, function and healthcare utilisation. Among the survey instruments was the Norwegian version of Nijmegen Continuity Questionnaire (NCQn). The NCQn has positive formulated statements related to central elements in patient experienced continuity of care, scored on a Likert scale from strongly disagree (score 1) to strongly agree (score 5). Eight items measured „personal continuity“, divided in subscales „care provider knows me“ and „care provider shows commitment“. The patients answered these items regarding both GP and specialist. Further, four items measured „cross-boundary continuity“, related to collaboration between GP and most important specialist.

**Results**

In the study population, 63.4% were women, mean age was 57.6 years and average number of reported chronic diseases was 1.8. The mean score (95% CI) for subscale „GP knows me“ was 3.9 (3.9-4.0) and for „GP shows commitment“ 3.5 (3.5-3.6), compared to 3.1 (2.0-3.1) and 3.0 (2.9-3.0) in these subscales respectively regarding most important specialist. The score for „cross-boundary continuity“ was 3.3 (3.3-3.4). The „cross-boundary continuity“ significantly increased with increasing age and was higher for men compared to women. The score on „GP knows me“ subscale was positively associated with number of GP consultations. Age, gender or number of chronic conditions had no impact on the personal continuity.

Patients referred to rehabilitation with a cancer diagnosis scored lowest regarding both „GP knows me“ (3.8) and „GP shows commitment“ (3.3) and highest regarding specialist, with 3.1 on both personal continuity subscales, but still lower compared to the GP. On the „cross-boundary continuity“ scale, patients referred for respiratory disease scored highest (3.7) and neurological disease lowest (3.0).

**Conclusion**

Patients referred to rehabilitation seems to agree on statements that their GP knew them well, whereas on the other subscales measuring continuity of care the reported experience was closer to a neutral response. Cross-boundary continuity regarding collaboration between GP and specialist varied by diagnostic groups.

**Keywords** Continuity. Patient satisfaction, general practice, health care

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**OP056 Association between use of quality of care report for chronic conditions and medical engagement in general practice**

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**Background:**

There is an increasing focus on measuring quality of care rather than volume of care in general practice. Quality of care differs between clinics and recent studies have suggested medical engagement is linked with beneficial outcomes for health care organisations in the secondary sector. However how medical engagement is linked with quality of care in the primary health care sector has yet not previously been studied. In 2013, the Danish general practitioners reported quality of care indicators for diabetes and chronic obstructive pulmonary disease to a central database for their own quality of care improvement and monitoring. Some of the process measures indicate whether the GPs have used their quality report for selected targets for diabetes and chronic obstructive pulmonary disease.

**Aim:**

This study investigates whether there is an association between the use of quality reports and medical engagement among general practitioners.

**Methods:**

We use logistic regression analysis to explore the likelihood of using these quality reports in relation to a measure of medical engagement and adjust for general practitioner demographics and other clinic characteristics for a sample 326 general practitioners in 2013. The analysis is based on a measure of individual level medical engagement among single-handed GP clinics.

**Preliminary results:**

There is a positive link between the use of quality reports in electronic chronic care records and selected quality of care indicators for patients diagnosed with diabetes and chronic obstructive pulmonary disease, and with increasing medical engagement. We did not find any association between the use of quality report and GP demographics and other clinic characteristics.

**Conclusion:**

Use of quality report for management of chronic conditions in general practice is related the degree of medical engagement among general practitioners.
**OP057 Medical and non-medical predictors of initiating long-term use of proton pump inhibitors: a nationwide cohort study of first-time users during a 10-year period.**

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**Background:**
Studies of the increasing use of proton pump inhibitors (PPIs) have mainly focused on prevalent long-term use and associations with gastrointestinal morbidity and comedication. Little is known about non-medical characteristics of first-time users of PPI, and predictors of initiating long-term use of PPIs.

**Objectives:**
To describe medical and non-medical characteristics of first-time PPI users during a 10-year period and to analyse predictors of initiation of long-term use (>60 defined daily doses (DDDs) within 6 months) of PPIs.

**Material/Methods:**
The study is based on a nationwide cohort study of first-time users of PPI. Data were collected from Danish national registers. Individuals redeeming their first prescription for a PPI (omeprazole, lansoprazole, pantoprazole, rabeprazole, esomeprazole) in 2001 and 2011 were identified. Redemption of more than 60 DDDs of PPI within 6 months defined long-term use. Logistic regression models were used to determine the associations between previous diagnoses, comedication and socio-economic characteristics and initiation of long-term use of PPIs in 2011.

**Results:**
From 2001 to 2011 incidence of first-time users increased with an incidence rate ratio of 1.53 and mean quantity of PPI redeemed at first prescription increased by 44.6%. In 2011 a total of 37.6% redeemed >60 DDDs within 6 months, and 96% of the long-term users did not have a diagnosis registered which indicated treatment. New onset long-term use was significantly associated with low income and low educational level when adjusting for other predisposing variables.

**Conclusion:**
Proton pump inhibitor treatment is increasingly initiated with larger quantities prescribed for indications that are unidentifiable from the registers. Morbidity and comedication seem to be the strongest predictors of new onset long-term use of PPIs. However, there is also an independent social gradient.

**OP058 Irritable bowel syndrome, chronic fatigue and quality of life ten years after a Giardia lamblia epidemic in Norway 2004**

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**Background:**
Irritable bowel syndrome (IBS) is a well-known complication after infective gastroenteritis. Chronic fatigue (CF) has been observed after certain viral infections, but evidence is also emerging associating CF with infective gastroenteritis. IBS is known to negatively affect quality of life (QOL), but less is known about CF and QOL and more specifically the QOL in these conditions when they are associated with previous gastroenteritis. In 2004 there was a large outbreak of Giardia lamblia infection following contamination of a drinking water reservoir serving the city of Bergen. This outbreak has been thoroughly studied, and an association between verified giardiasis and IBS and CF three and six years later has been demonstrated.

**Objectives:**
To measure QOL in patients ten years after Giardia lamblia infection, as compared to a control group. To investigate QOL in relation to IBS and CF.

**Material/Methods:**
This was a prospective cohort study with mailed questionnaire to 1252 exposed patients with verified giardiasis, and a 2:1 control group matched by gender and age ten years after the exposure. The main outcomes were IBS according to Rome III criteria, CF defined by the Chalder Fatigue Questionnaire and QOL measured with the SF-12 questionnaire.

**Results:**
Preliminary results showed a statistically significant difference in QOL between the exposed group and the control group both on the physical component score (51.4 vs 54.2, p-value <0.001) and the mental component score (48.8
there was no difference in QOL between individuals with IBS in the exposed and control group. Respondents with CF in the exposed group had a lower physical component score than those with CF in the control group, (43.3 vs 49.1, p=0.001), but the mental component score was similar (42.0 vs 41.4, p=0.684).

**Conclusions:**
*Giardia lamblia* infection is associated with a lower quality of life ten years later. We will explore how this is related to other outcomes, like IBS and CF, and present more results at the conference.

**Keywords:** Post-infectious complications, irritable bowel syndrome, chronic fatigue, giardia lamblia, quality

**OP059 Swedish general practitioners’ attitudes towards treatment guidelines - a qualitative study**

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**Background:**
Drug therapy in primary care is a challenge for general practitioners (GPs) and the prescribing decision is influenced by several factors. GPs obtain drug information in different ways, from evidence-based sources, their own or others’ experiences, or interactions with opinion makers, patients or colleagues. The need for objective drug information sources instead of drug industry-provided information has led to the establishment of local drug and therapeutic committees. They annually produce and implement local treatment guidelines to promote rational drug use.

**Objectives:**
This study describes Swedish GPs’ attitudes towards locally developed evidence-based treatment guidelines.

**Methods:**
Three focus group interviews were performed with a total of 17 GPs working at both public and private primary health care centres in Skåne in southern Sweden. Transcripts were analysed by conventional content analysis.

**Results:**
We found two main themes: GP-related influencing factors and External influencing factors. The first theme emerged when we put together four main categories: Expectations and perceptions about existing local guidelines, Knowledge about evidence-based prescribing, Trust in development of guidelines, and Beliefs about adherence to guidelines. The second theme included the categories Patient-related aspects, Drug industry-related aspects, and Health economic aspects. The time-saving aspect, trust in evidence-based market-neutral guidelines and patient safety were described as key motivating factors for adherence. Patient safety was reported to be more important than adherence to guidelines or maintaining a good patient-doctor relationship. Cost containment was perceived both as a motivating factor and a barrier for adherence to guidelines. GPs expressed concerns about difficulties with adherence to guidelines when managing patients with drugs from other prescribers. GPs experienced a lack of time to self-inform and difficulties managing direct-to-consumer drug industry information.

**Conclusions:**
Patient safety, trust in development of evidence-based recommendations, the patient-doctor encounter and cost containment were found to be key factors in GPs’ prescribing. Future studies should explore the need for transparency in forming and implementing guidelines, which might potentially increase adherence to evidence-based treatment guidelines in primary care.

**OP060 Skin Abscesses in Estonia**

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**Background:**
Skin abscesses are common reason to visit ER or a family doctor. The primary treatment for cutaneous abscesses is incision and drainage (I&D). The prescription of antibiotics after this procedure is not straightforward. No information prior to this study was available about the situation in Estonia.

**Objectives:**
To give an overview about the disease, its riskfactors, etiology and treatment choices according to available literature. To access situation in Estonia 2015, what are the treatment choices Estonian family doctors use. To create a guideline treatment how to treat skin abscesses in Estonia.

**Material/Methods:**
Literature overview using Pubmed, The Cochrane Library database; UpToDate; Medscape and Google search - key words: *Cutaneous abscess; Pilonidal abscess; Boils; Furuncul; Carbuncul.* Estonian Health Insurance Fund provided information about prescriptions made in 2015 for ICD-10 codes L02….L02.9. Epidemiological information: age, sex, date when diagnose was set and by whom was also given by Estonian Health Insurance Fund.
Results:
In 2015 11'386 Estonians were diagnosed with skin abscess, some of them more than once – total number 16'144 cases. Prescription drugs were administrated 12'260 times. Family doctors write more prescription drugs than other specialists. The most common drug to prescribe was Cefadroxil (2294 times). Almost no drugs for skin abscesses were prescribed during national holidays and weekends (p<0.001). In Estonia CA-MRSA is relatively uncommon. With this study a guideline for skin abscess treatment for Estonian family doctors was made.

Conclusion:
The incidence for skin abscesses in Estonia was in 2015 837:100'000, which is comparable to other authors. Males have twice as much skin abscesses than females. During summer time (July, August, September) the prevalence of skin abscesses is higher than in winter months. According to literature incision and drainage is sufficient method for uncomplicated skin abscesses, but Estonian doctors, especially family doctors choose to use antibiotics in addition to incision and draining, preferring Cefadroxil.

Keywords: Cutaneous abscess; Pilonidal abscess; Boils; Furuncul; Carbuncul, guideline for skin abscesses

OP061 Changes in CVD risk factors among adolescents during country’s transition

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Background:
Atherosclerosis has its origin in childhood. Behavioural CVD risk factors, as developing early in life, shaped by environment and are difficult to change. Influence of epidemiological/nutrition transition is significant. Important to investigate changes in CVD risk factors under environmental influences during transition with regard to globalization, modern migration and possible burden on primary health care. Russia faced significant political and economic changes (natural experiment) since collapse of USSR during past decades and is world-famous for the high CVD mortality.

Objectives:
To capture changes in CVD risk factors among youth during country’s transition.

Methods:
Cross-sectional surveys on CVD risk factors conducted among adolescent in Pitskäntä district of Republic of Karelia in North-West Russia. All ninth-grade students in 1995 (N = 385, response rate 95%) and in 2004 (N = 395, response rate 85%) were included in the survey samples.

Results:
Systolic blood pressure decreased among boys. Diastolic blood pressure decreased in both genders Total cholesterol increased statistically only among girls. Body mass index did not exhibit any significant changes in both genders. About half of youth exercised 2-3 times a week in leisure time with some improvements among girls by 2004. Daily smoking doubled among girls. Tobacco and alcohol were easy accessible. Gender differences in alcohol consumption have diminished by 2004. Number of youth never tried alcohol decreased. Weekly alcohol drinking more than doubled in both genders. Beer consumption has tripled among girls. Vegetable, fruit and berry consumption together with purchasing food/drinks high in saturated fat and sugar has increased. Nutritional literacy was rather low and further decreased between both genders.

Conclusion:
Country’s transition has an effect on health behavior of youth. With regard to some positive changes, negative changes prevail in health behavior of adolescents. Results of this study may be extrapolated into context of other countries in transition and migrants arriving to western countries from less developed ones. Preventive public health measures should be considered earlier to lower burden on health systems, improve and population health.

OP062 The normal weight development

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Background
Numerous cross-sectional studies have shown that the average body weight has been increasing in the general population during the last 50 years. Only few longitudinal studies, and only in selected populations, have described weight development over a lifetime.

Objective
To describe long-term weight changes in relation to age in the general population.

Material/Methods
INSUAP was an observational study of a general practice population. In 1998-2000 in a rural town in Denmark all
(1,970) adults (20-69 years) were invited, and 1,374 (70%) participated. After nine years 1,121 (85% of those alive) took part in the follow-up study. Weight was measured at baseline and self-reported at follow-up. A history of body weight 1, 5 and 10 years prior to the baseline and at age 20 was also obtained.

**Results**

At baseline the mean age was 45 years (SD 12), and the mean BMI was 25.7 (4.7). Mean body weight was 75.6 kg (15.2), and at follow-up the mean weight was 77.2 kg (15.5). During the 9 years of observation the body weight increased in subjects 20 to 60 years old, whereas it decreased in subjects older than 60 years. Weight gain rates were large in younger adults (0.7 kg/year in participants 20–25 years) and incrementally smaller in older adults. Subjects older than 60 years lost weight on average. This pattern was common for all subgroups examined, but in for instance female subjects, weight loss was observed 10 years earlier than in men. Normal-weight subjects were gaining weight irrespective of age (with decreasing pace in older subjects), whereas participants who were obese at baseline lost weight on average if they were 40 years or older.

The self-reported weight history in combination with the baseline and follow-up assessments of weight revealed that the average body weight increased throughout adulthood in all birth cohorts from 1928 to 1979. The weight gain throughout life appears to be almost linear but steeper in the younger birth cohorts compared with the older.

**Conclusion**

The weight history combined with the baseline and follow-up assessments indicate that weight was gained throughout adulthood to the age of 60–65 years, with a plateau or decline thereafter. Age seems to be a good surrogate marker for underlying physiological processes resulting in the average characteristic weight change pattern. The pattern does not seem to be an artifact of cohort effects. We have called this phenomenon 'the normal weight development'.

OP063 Cardiovascular risk communication in primary care - physicians' ethical and practical dilemmas

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**Background**

Cardiovascular disease (CVD) is a major cause of disease and death. Risk of CVD is determined by a combination of lifestyle and genetic factors. Physicians in primary care, both general practitioners (GPs) and GP specialty trainees, meet patients at risk of CVD on a daily basis. Previous studies regarding cardiovascular preventive consultations have shown that physicians’ experience dilemmas, for example concerning the patient’s own responsibility for lifestyle changes. At the same time less is known about primary care physicians’ experience of communicating CVD risk as such.

**Objectives**

This study is part of a PhD project with the overall objective to gain knowledge of the ethical and clinical issues concerning CVD risk communication in general practice. The aim of the present study is to describe and analyze the dilemmas that GPs’ and GP specialty trainees’ encounter in CVD risk communication.

**Material/Methods**

Qualitative design, data were collected by focus group interviews (eight interviews) with GP and GP specialty trainees (51 physicians) and analysed using qualitative content analysis. The data were then further analysed with a focus on ethical and practical dilemmas.

**Results and Conclusion**

Ethical dilemmas described concern 1) Talking about lifestyle but not blaming or accusing the patient, 2) Priority setting when patients presented other problems, 3) Bringing up a subject that the patient has not asked about, 4) Talking about risk without worrying the patient, 5) Meeting patients not contributing to lowering the risk. These dilemmas mainly relate to respecting autonomy and not harming the patient.

Practical dilemmas described concern 1) Managing lack of time, 2) Having difficulties in determining the risk for the individual, 3) Having difficulties making information comprehensible. These dilemmas are of organizational, educational and pedagogical character.

This study suggests that GPs and GP specialty trainees experience several dilemmas of different character when communicating CVD risk.

Both the GPs and the GP specialty trainees seem to have developed strategies to handle the dilemmas that they experience.

OP064 'It cannot do any harm' - A qualitative study of individuals without formal education motives for participating in a primary prevention intervention in general practice

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Background
Research shows an under-representation of socio-economically disadvantaged groups in the recruitment and attendance to primary prevention and rehabilitation initiatives. These groups include individuals without formal education. Knowledge about under-represented groups’ motivation for attending primary prevention is highly relevant for designing interventions that aim to reduce inequality in health.

Objectives
This study explores the motives of individuals without formal education for participating in a primary prevention intervention in general practice.

Material/method
The intervention „Early detection of and intervention towards chronic diseases (Check-In)“, which took place in Copenhagen, Denmark (2013-2016), examined whether an invitation to health checks by the general practitioner (GP) could motivate individuals without formal education aged 45-64 years to change adverse health behaviour. The intervention project employed a randomized controlled trial design together with an ethnographic study of the clinical encounter including qualitative interviews with the participating individuals and GPs. This paper builds on data that were obtained through 17 semi-structured interviews with individuals without formal education participating in the intervention project.

Results
The vast majority of the participants attended the health check for the sake of their health. They emphasised their age as a reason, and that they preferred to „better be safe than sorry“. However, there appear to be a noticeable difference between those participants who expressed trust in their GP and those who did not. The participants who expressed trust in their GP felt an obligation of loyalty towards the GP as the GP had invited them to the health check. These participants emphasised that the health checks took place in a familiar setting. In contrast, participants, who for different reasons disliked their GP, motivated their attendance as an obligation towards society, in the sense that they felt obliged to respond when they were addressed by the health care system. They imagined that other people could benefit from their participation.

Conclusion
Individuals without formal education were motivated to participate in a primary preventive intervention at general practice for one or more of three reasons: the sake of one’s health, the sake of the doctor and the sake of society. This study indicates that a trusting relationship with the GP can be a motivational factor. Those who dislike their GP may be motivated by an obligation towards society and a hope of helping other people. This study provides important insights into recruitment of under-represented groups to future interventions.

Trust, Qualitative research, Recruitment, Primary prevention, Intervention

OP065 General practitioners inviting individuals without formal education to a preventive health check: Testing the recruitment to a randomized controlled trial

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Background
Preventive health checks are expected to reduce the risk of developing chronic diseases and identify diseases at an early stage; however, research in the field shows little or no effect. One possible explanation to this is that individuals who choose to participate in preventive health checks are not those in need of a health check. In general, participants have a higher educational level and are more often non-smoker compared to non-participants. Thus, alternative recruitment strategies are needed to test whether this will improve the effect. This hypothesis is tested in the randomized controlled trial Check-In, where individuals without formal education are invited to a preventive health check directly by their general practitioner (GP).

Objective
This study tests the recruitment strategy in Check-In. We test the following: 1) Who responds a questionnaire from the GP, 2) how is the health behavior for those enrolled in the intervention, and 3) what characterizes those attending a preventive health check at the GP compared to those not attending.

Material/Method
Check-In was conducted in Copenhagen, Denmark from 2013-2016 and included 56 GPs. From patient lists of these GPs, questionnaires were sent to citizens aged 45-64 years – in total, 17,131 questionnaires. Individuals who answered the questionnaire and who had no formal education were allocated to either health check or control. The intervention group received an invitation to a preventive health check at their GP. The questionnaire survey will be linked to national registers to compare the respondents with the non-respondents; furthermore, questionnaires data will be used to examine the individuals enrolled in the intervention, and to compare those attending the preventive health check at the GP with those not attending.

Results (preliminary)
Overall 49% (n=8,383) answered the questionnaire from the GP. Of the individuals who answered the questionnaire 17% (n=1,424) had no formal education; of these 23% (n=324) had no wish of further contact. 1,104 individuals were randomized and 549 were allocated to the intervention group. Of those allocated to the intervention group 66% (n=363) attended the preventive health check at the GP. The analyses are currently being performed and will be
presented at the conference.

**Conclusion**
The results from the study will indicate if a proactive action from the GP inviting to a preventive health check is a possible way to reach individuals without formal education; thereby, the study provides important knowledge about preventive health check and the recruitment strategy to these.

**Keywords**
General practitioner; preventive health check; recruitment; randomized controlled trial.

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**OP067 Post consultation symptom trajectories in children presenting to primary care with acute cough and respiratory tract infection: latent class analysis of a prospective cohort study**

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**Background**
Accurate advice for parents regarding post-consultation symptom trajectories in children with respiratory tract infections (RTIs) has two potential benefits: (i) improved safety-netting by helping parents know if their child’s experience is normal; and (ii) the setting of realistic expectations regarding symptom duration and severity. Both are likely to help parents make better decisions regarding the need to re-attend.

**Objectives**
To investigate if distinct post-consultation symptom trajectory groups can be defined among children presenting to primary care with acute cough and RTI, and whether baseline characteristics can be used to assign trajectory group membership.

**Material/Methods**
Parents of 2296 children were invited to complete a symptom diary recording the severity of six symptoms (cough, shortness of breath, disturbed sleep, being unwell, coping with normal activities and fever) on a 7-item Likert scale (from zero ‘normal’ to six ‘as bad as can be’) for 28 days or until they scored ‘normal’ on all symptoms on two consecutive days. We used longitudinal latent class analysis (LLCA) to identify post-consultation trajectory groups and univariable multinomial regression to assess whether baseline characteristics could predict trajectory group membership.

**Results**
Complete symptom diaries were available from 1408 (61.3%) children. Symptom diary data showed that cough was the most persistent symptom with a median overall duration of 9 days (6-14). LLCA of cough severity defined five classes, and three of them were apparent variations on a theme and could be ranked: (i) ‘very rapid recovery’ (29%) with less severe symptoms and short duration; (ii) ‘rapid recovery’ (38%) with symptoms lasting somewhat longer; and (iii) ‘intermediate recovery’ (18%) with more severe symptoms and lasting even longer, but resolving by day 11. The remaining two classes showed different patterns: (iv) ‘persistent symptoms’ (10%) with moderate cough severity at consultation and then little change in symptoms until at least ten days later; and (v) ‘initial deterioration with persistent symptoms’ (6%) exhibits an initial increase in severity from the most severe starting point and a slow rate of recovery across the subsequent fortnight. Certain baseline characteristics were associated with trajectory group membership, but without any trend or pattern that could predict membership in a useful manner.

**Conclusion**
Parents can be advised that most (94%) of children’s coughs exclusively improve post-consultation. Baseline characteristics do not predict trajectory group membership in a clinically useful manner, and therefore the decision to re-attend should rest on parents’ observations of their child’s illness.

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**OP068 Use of methenamine as preventive treatment in women with recurrent urinary tract infections**

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**Background:**
Urinary tract infections (UTIs) are the most common bacterial infections in women of all ages. An estimate of 30% to 44% of women have a new urinary tract infection within six months after an initial infection. Healthy women with
normal urological anatomy account for the majority of patients with recurrent urinary tract infections. A Cochrane meta-analysis from 2012 has investigated the impact and benefits of the methenamine as preventive treatment for urinary tract infections. Thirteen studies were included, with a total of 2032 participants. The authors conclude that it may be effective to treat UTI prevention with methenamine. In Norwegian general practice, methenamine is prescribed as long term treatment, especially in older women to prevent recurrent UTIs, and accounts for 20 % of the total Norwegian antibiotic prescribing in 2015.

Methods/Design:
A complete history of antibiotics dispensed from all Norwegian pharmacies, collected from the Norwegian prescription database (NoPDr) 2005 to 2015, was analysed. Women > 50 years old with recurrent UTIs were included, defined by two or more incidents within six months, or three or more within twelve months. The UTI antibiotics included were nitrofurantoin, pivmecillinam, trimethoprim and ciprofloxacin. Any time span for use of methenamine was identified, and the use of UTI antibiotics during this time span was compared with the patients that did not receive methenamine treatment.

Results:
The women were divided into three groups. One who never received methenamine, one before receiving methenamine and one after receiving methenamine. The group with recurring UTIs who never received methenamine had a mean on 0.42 prescriptions per month which equals 5 prescriptions per year. The findings so far shows that there is a highly significant reduction of antibiotic use after receiving methenamine. The data has been analysed early 2017, and the results will be presented at the Nordic Congress.

OP069 An assessment of antibiotic use and bacteriological findings in uncomplicated urinary tract infections in Norway from 2001-2015

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Objective
The objectives of this study were to assess the bacteriological findings and resistance patterns in urine samples from women with acute urinary tract infections, and assess the relationship between the use of antimicrobial agents in treatment of acute urinary tract infections and resistance patterns over the last 15 years in Norway.

Methods
We have compared bacteriology and resistance patterns in urine samples taken from women with uncomplicated urinary tract infections in three different periods over the last 15 years. The material consists of 184 urine cultures from 2001, 406 urine cultures from 2010-11 and 259 urine cultures from 2013-15.

Results
Escherichia coli is the main bacterial agent in 80 % of the cultures. Staphylococcus saprophyticus represent between 5-17 %. Resistance towards mecillinam shows some variation, but remains below 9 %. There is little to no resistance towards nitrofurantoin. Resistance towards trimethoprim seems to have stabilized over the last 5 years at around 20 %. Amoxicillin resistance has some variations, but remains quite stable around 30 %. Antibiotic resistance in Staphylococcus saprophyticus has been known to be uncommon, but in our comparison Staphylococcus saprophyticus seems to become increasingly resistant to amoxicillin, and is also developing resistance towards trimethoprim.

Discussion/conclusion
Mecillinam and nitrofurantoin are both excellent first choices for empirical treatment of uncomplicated urinary tract infections. Trimethoprim should be considered removed as a first choice option. Sentinel surveillance of bacteriology in uncomplicated cystitis is essential for the continuous work of updating national guidelines for empirical treatment of uncomplicated urinary tract infections. We suggest looking into the possibility of making common European guidelines for treatment of uncomplicated urinary tract infections.

OP070 Is bacteriuria related to vitamin D deficiency among elderly residents of nursing homes?

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Background
Up to half the residents of nursing homes for the elderly have asymptomatic bacteriuria and 25-hydroxyvitamin D (25OHD) concentrations are generally low. Vitamin D is a modulator of the immune system and also involved in protection of the epithelium in the urinary tract.

Objectives
To investigate if there is an association between bacteriuria and vitamin D deficiency among elderly residents of nursing homes.

Material/Methods
Design: Cross-sectional study. Setting: Residents of Swedish nursing homes for the elderly. Patients: From January to March 2012, a voided urine specimen for culture and a blood sample for analysis of 25OHD concentration was collected from all participating residents, regardless of the presence of symptoms. Exclusion criteria: urinary catheter, incontinence or dementia too severe to be able to provide a voided urine specimen or to cooperate when taking a blood test, terminal illness or refusing participation. This study was part of another study of vitamin D and a study of antimicrobial resistance. Outcome Measures: Urine cultures and serum 25OHD concentrations. Logistic regression to examine the association of bacteriuria with vitamin D deficiency defined as 25OHD <25nmol/L.

Results
Voided urine specimens and blood samples were obtained from 403 of 901 residents of 22 nursing homes. The mean age was 87 years (SD 6.6), 70% were women and 19% had vitamin D supplementation. There was significant growth of potentially pathogenic bacteria in 32% (128/403) of voided urine cultures. E. coli was by far the most common bacterial finding, present in 81% of positive urine cultures. Mean (SD) serum 25OHD concentration was 35 nmol/L (21) and 38% (153/403) had 25OHD <25 nmol/L. There was no significant association between bacteriuria and vitamin D deficiency (25OHD <25nmol/L), OR 1.5 (95% CI 0.93-2.3; p=0.10) adjusted for age and gender.

Conclusion
Bacteriuria was common among the nursing home residents as well as vitamin D deficiency. However, there was no significant association between bacteriuria and vitamin D deficiency. This adds to the ongoing debate about the role of vitamin D in non-skeletal conditions.

OP071 Pharyngotonsillitis - exploring diagnostic predictive values

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Background
Diagnosing Group A streptococci (GAS) in pharyngotonsillitis is a clinical challenge despite decision rules such as the Centor criteria, but has been facilitated with the introduction of point-of-care testing with rapid antigen detection tests (RADT). While these tests have great sensitivity and specificity, predictive values depend on prevalence, which can differ between various populations. Predictive values for other pathogens are poorly studied. C-reactive protein test (CRP) is commonly used in Swedish primary health care despite the lack of knowledge about its interpretation, especially in regard to Centor score and to other pathogens than GAS.

Objectives
To examine how well medical history, clinical findings (including Centor score), and point-of-care testing with RADT and CRP can predict the presence or absence of different pathogens in acute sore throat in a primary care setting. The pathogens of interest are GAS, any other bacteria, and only viruses.

Material/Methods
Observational study in Swedish primary health care. 220 patients aged 15-45 attending with suspected pharyngotonsillitis were included. Apart from the regular clinical management, patients were sampled from nose, throat and blood and assessed in a structured way for medical history and clinical findings. The samples were screened for 20 different bacteria and viruses using PCR, culture and serology. Clinical findings and laboratory test results were compared to the microbiological results to calculate predictive values.

Results
The prevalence of GAS was 30%. Absence of cough was the clinical finding most strongly associated with GAS (OR 4.5 (95% CI 2.1-9.9), PPV 41%), while a Centor Score of 3 or 4 gave PPVs of 44% and 58% respectively. RADT alone, regardless of Centor score, had an overall PPV of 84%, but increased to 93% when testing was limited to patients with Centor Score 3-4. For patients with a Centor Score of 3-4 and negative RADT, PPV for any bacterial finding was 39 % and 33 %, respectively. Among patients with GAS tested with CRP, an elevated value (>8 mg/L) was seen in 88%, and the median value was 47, as compared to 9 among patients without GAS (Mann-Whitney, p<0.001). ROC analysis showed a fair performance of CRP as a marker of GAS (AUC 0.75). CRP was positively associated with increasing Centor score (Kruskal-Wallis, p<0.001).

Conclusion
Clinical history and findings exhibit low to moderate PPV’s for Group A streptococci, both alone and in combination. Combining them with RADT greatly enhances PPV and minimizes false positives. CRP alone has only a fair ability to diagnose group-A streptococci, but normal values rule out most cases.

Keywords: pharyngotonsillitis, predictive values
OP072 Diagnostic methods for acute otitis media in 1 to 12 year old children in primary health care

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Background
Otoscopy alone has low sensitivity and specificity for acute otitis media (AOM). Otomicroscopy and pneumatic methods are superior to otoscopy, however these methods require clinical skills. The use of different diagnostic methods for AOM differs between countries and has not been evaluated in Sweden since new guidelines were introduced in 2010.

Objectives
To describe the extent of which diagnostic methods and written advice were used for AOM in children 1 to 12 years old.

Material/Methods
Design: Cross-sectional study. Setting: Primary health care centres. Participants: All General practitioners (GPs) and resident physicians (RPs) at 27 primary health care centres in Sweden were asked to complete a self-administrated questionnaire including diagnostic approach and the management of AOM; 75% (111/148) responded to the questionnaire. Outcome Measures: Physician educational level and gender, the use of otoscopy, pneumatic otoscopy, otomicroscopy, tympanometry and written advice. Logistic regression to evaluate the association between the physician’s educational level and gender and the use of diagnostic methods and written advice.

Results
To diagnose AOM, 98% of the physicians (109/111) often or always used otoscopy, in addition to this 17% often or always used otomicroscopy, 18% pneumatic otoscopy and 11% tympanometry. Written advice to parents was provided often or always by 19% of the physicians.

The GPs used otomicroscopy more often than RPs, adjusted OR 4.9 (95% CI 1.5-17; p=0.011). For the other diagnostic methods, no differences were found. Female physicians provided written advice more often than male physicians, adjusted OR 5.2 (95% CI, 1.6-17; p=0.0061).

Conclusion
Otoscopy was by far the most commonly used method for the diagnosis of AOM. Female physicians provided written advice more frequently than did their male colleagues. GPs used the significantly better method otomicroscopy more often than RPs, therefore it is important to emphasise teaching of practical skills in otomicroscopy in the specialist training programme for general practice. A correct diagnosis is important for avoiding potentially harmful antibiotic treatments, antimicrobial resistance and possible delay of other diagnoses.

OP073 Prevalence of complex multimorbidity in primary healthcare in Iceland

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Background:
In recent years, interest in multimorbidity has steadily been increasing, as reflected by a large increase in research papers published in this field. In previous research on the concept of multimorbidity, van den Akker’s definition of multimorbidity has generally been used, which reads as follows: “the co-occurrence of two or more diseases within one person.” In 2016, a research group in Australia published an article where the concept of complex multimorbidity was proposed, i.e.: “co-occurrence of three or more chronic conditions affecting three or more different body systems within one person.” In light of the foregoing, this study was carried out in order to calculate the prevalence of complex multimorbidity in primary healthcare in Iceland.

Method:
To find patients with complex multimorbidity, data were retrieved from a comprehensive database of the primary healthcare of the capital area, which contains medical records on approximately two thirds of all primary care patients in Iceland. Nearly 220,000 patients who were in contact with 140 general practitioners in 16 healthcare centres were used as a reference to calculate the prevalence of complex multimorbidity.

Results:
The prevalence of complex multimorbidity in the primary care population was found to be 14%, it was higher among women, 17% compared with 11% in men. The prevalence rose with age being 5% in patients between 20 and 29 years old rising to 46% among those between 70-79 years of age. The most common diagnoses were cardiovascular disorders (I00-I99) and mental-and behavioural disorders (F00-F99).

Conclusions:
Our findings are somewhat in line with results from Australia. Despite using more restricted criteria to define multimorbidity, perhaps indicating a more serious health condition, the prevalence is high and increases with age. This supports the need for a holistic view of health and wellbeing of our patients.

OP074 Screening for skin cancer

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Background
Screening for skin cancer is not a part of the Danish screening program. But in the society and amongst medical organisations eg. The Danish Cancer Society there is a great awareness about skin cancer, especially malignant melanoma. Campaigns are conducted regularly, and in the television news there is information about UV index and warnings against staying in the sun around noon. Many consultations in the GP's surgery are about concern for moles and dots on the skin.

Objectives
I want to contribute to the discussion about skin cancer screening and to describe my experiences in screening 540 persons for skin cancer.

The US Preventive Services Task Force (USPSTF) have newly concluded: „that the current evidence is insufficient to assesses the balance of benefits and harms of visual skin examination by a clinician to screen for skin cancer in adults (I statement.)“

USPST find few - and none randomized - clinical trials on primary screening, where clinical visual skin examination assesses skin lesions using the „ABCDE rule“. The endpoint discussed is primary mortality reduction.

Materials/Methods
During the first 6 months of 2016 I participated in screening employees in a Danish pharmaceutical company. The employees had been offered a full body skin check. Around 70 % - 1300 persons signed up. Personally I screened 540 of these persons.

The method used was visual screening primarily using „ABCDE rule“ but in all cases supplemented by dermascopy.

Points for discussion
The setup did not allow to perform a strict study, but the amount of persons screened makes the experiences of the project interesting.

The details of the screening project will bee explained. The finding of cases of cancer suspicious skin lesions will be presented. Other impacts of the screening will be discussed and related to the statements from USPSTF.

OP075 Clinical management of new risk markers in routine first trimester screening

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Background
Denmark introduced a national tax-paid first trimester screening (FTS) programme in 2004 to all pregnant women regardless of age and risk status. The FTS is typically referred to as the neck fold scan (nakkefoldsskanning) despite the fact that the measurement of the neck fold is just one parameter in the calculation of the risk assessment – maternal age and the result of two hormones are included too.

FTS takes place at national ultrasound clinics, is performed by trained and certified sonographers and results in a risk assessment.

At some clinics, new additional risk markers have recently been included in the FTS. Inclusion of additional risk markers influences the risk assessment. In total four additional risk markers are at play in varying degree at the 20 local ultrasound clinics in Denmark

Objectives
The objective is two-fold. First, to illuminate the clinical management of a specific new risk marker included in routine FTS. Secondly, to outline the clinical consequences following the clinical management.

Material/Methods
The author did fieldwork at a medium size ultrasound clinic in Denmark with preferably younger, low risk pregnant women from semi-urban areas. Data material consists of observations of 56 FTS and semi-structured interviews with eight sonographers working with routine FTS.

Results and Conclusion
International, national and local clinical guidelines intend to stimulate the homogeneity of FTS in clinical practice resulting in standardised risk assessments. Despite these intentions FTS in clinical practice is heterogenetic. Firstly,
because of differing local organisation of FTS. Secondly, because of difference in the clinical management of a newly introduced risk marker, the nasal bone. This study identifies three different clinical positions: a no-change position, a consistent change position and a case-by-case position. Each position results in separate risk assessments. Only the first position reflects guidelines, the latter two results in non-guideline risk assessments. Especially for women in the grey zone area between 1:300-1:1000 this is of importance, because a non-guideline risk assessment can change a low risk assessment into a high risk assessment. So what researchers and clinicians uniformly call FTS is not one FTS, but different FTS depending on where it takes place and who is performing it. This raises questions of importance for GP’s and nurses working with information on FTS in general practice.

**Keywords:** routine first trimester screening, additional risk markers, clinical management, Denmark

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**OP076 How to improve the attendance to cervical cancer screening among immigrant women in Norway- a focus group study among care-providers**

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**Background**
The attendance to the Norwegian cervical cancer-screening program by immigrant women is significantly lower compared to that of Norwegian-born women. In addition, some immigrant groups have higher prevalence of cervical cancer that becomes detected at later stages. Therefore, there is a need to develop targeted interventions to close the disparity in cervical cancer screening between immigrants and non-immigrants. These targeted interventions should rely upon experiences of both the immigrant women and their health care providers.

**Objective**
Our aim was to obtain information concerning:
Their experiences regarding gynecological examinations and cervical cancer screening among immigrant women.
Their strategies (if any) to make these meetings work well, and suggestions to increase the proportion of immigrant women who participate in cervical cancer screening.
Their need of information or other facilitation to further increase participation of immigrant women to the screening program.

**Method**
We conducted seven focus groups interviews in Oslo among health providers in order to inform the development of an intervention to increase attendance to the cervical cancer-screening program among immigrants.

**Results**
The informants described both organisational and cultural barriers often related to immigrants. Organisational barrier such as consultations in which immigrant women take up several issues so that Pap smear did not become a prioritized issue was mentioned. In addition, consultations with immigrant women were often time-consuming for reasons such as the use of interpreters and lower health knowledge among some groups. With respect to cultural barriers, some GPs less often invited immigrant women to take the Pap smear, but they had seldom reflected upon this issue before.

The informants referred to communication strategies such as using short sentences. They used longer time to explain health issues. Different strategies were used to tackle the presence of the interpreter, who often was asked to wait outside under the gynaecological examination. In order to increase their knowledge about immigrant women and their susceptibility to cervical cancer, the informants wanted visits during lunch/breakfast at their offices. Placates to place in GP’s waiting room, health stations and schools where immigrants learn Norwegian language were also mentioned. Other options discussed were that compulsory post-graduate courses for GPs should include immigrant health issues.

**Conclusion**
The final results and conclusions will be presented at the conference in June. We will conduct the intervention among GPs in some areas of Bergen during spring 2017.

**Key words:** cervical cancer screening, immigrant women, intervention, general practitioners

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**OP077 The patient as a learner - The complementary learning Doctor-Patient relationship**

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**Background.**
The Doctor-Patient relationship has through history been characterized in differing manners: As a caring relationship envisaged in the Hippocratic Oath, a scholastic authoritarian relationship in medieval times into a
medico centered relation in Galean and modern scientific medicine. In a late modern era the relationship has been approached as „patient centered“ giving attention to the unique perspective of each patient, recognizing the importance of respecting patients’ own views – however transformed into medical terms and evaluation. In a postmodern medicine the relationship is moving even more towards a democratic and egalitarian direction – acknowledging the patient as self-sufficient and in the right to actively direct the relationship. Consequently we find that governmental laws increasingly impose patient involvement and the right to patient education. The legality of patient involvement and patient education challenges the Doctor-Patient relationship and communication strategies in the consultation. In constructing an educational intervention for patients with gastro-esophageal reflux disease we needed models to construct and perform a learning program for patients interacting with a teacher.

Objectives
The aim of this study is 1) to model the patient path through diagnosis, treatment and life aspects as both a treatment path and a learning path. 2) Model a learning relationship between the doctor and the patient giving arguments for choosing curriculum content and applying corresponding and adequate educational methods.

Material and methods
Analyses of common outcome measures in medical trials and taxonomy of education goals as referred in relevant literature, reflected in the teaching and learning experience of the researcher were performed. Supporting literature was sought in Quality of life research and Educational science and philosophy. Results Two models are suggested: 1) The patient path in patient education and treatment - viewing the path in a cause – effect perspective thus visualizing points of influence of differing interventions and circumstances and 2) The complementary Doctor-Patient learning relationship – viewing both the doctor and patient in a dualistic position of continuous teaching and learning. A learning perspective on the Doctor-Patient relationship allows a life-long learner perspective on both – viewed as a sound and normal personal development not focusing on pathology otherwise emphasized in the medical field.

Conclusion
Two models are developed for patient learning and Doctor-Patient interaction – useful both for structuring communication and analysis of scientific evaluation of patient education and learning.

OP079 Primary care physicians’ voices on sick leave certification. Focus group interviews in Sweden

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Background
Medically certified absence from work is considered high and varying in different parts of Sweden. The Swedish parliament therefore inaugurated several reforms to decrease the sick leave and the inequality of sick leave certification throughout the country. The knowledge of how these reforms have been perceived by primary care physicians is incomplete.

Objectives
To gain knowledge of the views of primary care physicians on the sick leave certification and rehabilitation process.

Methods
During 2015 six focus groups interviews with 2-8 participants focus were performed in primary health care in Västra Götaland (1.5 million i.e. one sixth of inhabitants in Sweden) including urban and rural areas. Groups were recruited by purposive sampling and included both GPs, interns, GP trainees and locums. An interview guide was used to cover areas of interest. The interviews were recorded and verbatim transcribed. Content analysis was used to identify meaning carrying units that were condensed and interaction between participants was identified. The authors met several times (triangulation) formulating subcategories, categories and finally, a comprehensive theme.

Results
The comprehensive theme was that physicians considered the mission to certify sick leave as emotive, a challenge to master and a combination of two incompatible roles, on the one hand authority on the other care for the patient. The categories were the physicians’ feelings and thoughts of influencing factors, strategies for handling, and suggestions for solutions.

Conclusion
Sick leave certification was considered an onerous and difficult task by primary care physicians and the sick leave certification process in Sweden should be reconsidered.

Key words Sick leave certification, primary care, qualitative study, physicians, focus groups.

OP080 Rethinking Primary health Care in rural areas - a comprehensive approach of inter-professional healthcare centre of primary and long term care in Saxony Anhalt

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Background:
Besides the aging of population caused by the demographic change, the number of General Practitioners in rural areas is declining due to retirement. At the same time, competencies of non-physician health care professionals are restricted. As filling the resulting gap with medical graduates and other health professionals is very difficult, this circumstance is prospectively coming to a crisis. First moves like optimizing practice processes and improving the cooperation and communication between all participants of the health care system form the base to tackle this tense situation.

Objectives:
Our research is conducted in order to identify available resources that can be used to ensure an adequate PHC. We set out to investigate chances and challenges of the participation of the community, involvement of volunteerism as well as opening former structures of the primary health care system in Germany.

Material/Methods:
Interviews were made (inhabitants, GPs etc.) in order to investigate the opinionated need and possible resources to improve medical, non-medical and nursing cooperation.

Results:
The decentralised corporatist character of the German healthcare system has important implications for any strategy that aims at strengthening PHC. A concept that focuses on enlarged responsibilities of non-physician health care professionals, particularly on long-term domestic care, which is largely covered by the German compulsory nursing care insurance is imperatively needed. It also has to cover regular home visits from nurses, physicians, physician assistants, physical therapists as well as from community volunteers.

Conclusion:
The comprehensive approach of the concept has to focus not only on patients’ needs for medical care, but also on social participation and empowerment. Patient-centered integrated health care requires a fundamental structural change to create budgets and structural incentives for population-related care for the future.

OP081 Who benefits from school doctors’ health checks: study protocol for a controlled trial in Southern Finland
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Background:
According to the Finnish law, school nurses check all students at grades 1 to 9 annually. In addition, school doctors check all students at grades 1, 5 and 8 (ages 7, 11 and 14 respectively). Vast resources are allocated to health checks of asymptomatic children. Simultaneously, students in other year levels receive very limited school doctor services. The optimal use of the skills and expertise of school doctors remains unknown. Furthermore, no proven method for screening students for evaluation by a physician exists.

Objectives:
The aims of the study are to 1) explore whether part of the school doctors’ routine health checks can be safely omitted using screening questionnaires which address the parents’, school nurses’ and teachers’ concerns regarding each student and to 2) evaluate the benefits of school doctors’ routine health checks.

Material/methods:
The study is a prospective, controlled, multicentre trial which will be conducted by comparing the need for a doctor’s appointment to the benefit gained from it. Before the school doctor’s check-up, the parents, nurses and teachers fill a simple questionnaire, developed for this study, to identify any potential worries about the student. The questions were partly chosen from the Strengths and Difficulties Questionnaire (SDQ). Additional questions concerning the student’s growth, physical well-being, learning, school absenteeism and the well-being of the whole family are included. The doctor is blinded to the answers of the questionnaires. Directly after the health check the doctor fills an electronic report including possible given instructions, significant discussions, diagnoses and follow-up plans and his/her estimate of the benefit of the medical appointment. The student and the parent fill feedback forms where they evaluate the benefit of the health check. The aim is to include schools from 5 different cities in Finland. From each doctor the aim is to get at least 50 students from grade 1 and 50 students from grade 5. The need for a doctor’s appointment and the benefit gained from it will be compared using contingency tables and independency tests. At one year after the check-up, the implementations of the follow-up plans will be analyzed.

Results:
A pilot study including 132 students was conducted in 2015-2016 in 3 primary schools in Helsinki. Of those students categorized as „no need for doctor’s health check”, very few had significant problems that require doctor’s expertise.

Conclusion:
The trial will increase our knowledge of the benefits of school doctor’s routine health checks and test the developed screening method more widely. Focusing the health checks to the students in greatest need would allow school
doctors to be better involved in the care of students of all ages.

OP082 Risk of Bias in Model-Based Economic Evaluations in Primary Care: The ECOBIAS Checklist

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Background
Economic evaluations are becoming increasingly in the field of primary care. Several biases can occur when performing economic evaluations (EEs). It is therefore important for policymakers to be able to assess potential biases and for researchers to minimize them.

Objectives
This article aims first to identify biases that are specifically related to model-based EEs and to illustrate their potential impact on economic outcomes using examples from the literature in the field of primary care. Second, the article aims to present a checklist for assessing the risk of biases in EEs (the ECOBIAS checklist), which can be used for trial- and model-based studies.

Methods
Several possible sources of bias in model-based EEs were identified using the Philips guideline for good practices in modelling economic studies as a structuring framework. All biases were illustrated using publishes primary care models as an example. By combining biases that can occur in trial-based with those that can occur in model-based studies, which were identified in a previous article by the author group, a checklist for assessing biases in EEs was developed (ECOBIAS).

Results
Eleven model-specific biases were identified and classified. The impact of these biases could be massive, changing the outcomes from being highly cost-effective to not being cost-effective at all. The ECOBIAS checklist includes a general part (part A) and a model-specific part (part B).

Conclusions
In this study, we identified several biases that are related to model-based EEs and developed the ECOBIAS checklist for identifying biases in economic evaluations. Dealing also with health economics methods in primary care research is necessary and will be more important in the future. We hope that our results and the ECOBIAS checklist will help to reduce biases in future EEs and will increase faith in model-based studies in particular.

OP083 Is self-rated health in adolescence a predictor of prescribed medication in adulthood? Findings from The (HUNT) study and the Norwegian Prescription Database

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Background.
Self-rated health (SRH) is a widely used health measure predicting morbidity and mortality in a range of populations. However, the longitudinal relationship between SRH and medicine use is scarcely investigated.

Objectives.
The aim of this study was to examine adolescence SRH as a predictor for prescribed medication in young adulthood.

Methods.
Baseline data, gathered from 8,982 adolescents (mean age 16.0 years) in the Young-HUNT I survey (1995–1997), were linked to individual data from the Norwegian Prescription Database (NorPD), including information on all medications prescribed in 2013–2014. Gender-stratified negative binomial regression models were used to investigate the association between SRH and medication, adjusted for age, baseline self-reported medicine use, smoking, physical and mental disability, and physical activity. Based on the Anatomical Therapeutic Chemical (ATC) Classification System, total consumption and consumption related to different ATC groups were examined.

Results.
For both genders, the unadjusted analyses showed a dose–response relationship between SRH in adolescence and total consumption in young adulthood, with poorer SRH predicting higher average medication. Similar pattern emerged for the specific ATC groups: Antinfectives for systemic use (J), Musculo-skeletal system (M), Nervous system (N) and Respiration (R), for females, and M and N for males. In the adjusted analyses, the predictive power
of SRH on both total consumption and the ATC group: J, M and N, for females, and for the ATC group N, for males, remained statistically significant.

**Conclusion.**
SRH in adolescence predicts prescribed medication for both physical and mental health domains in adulthood. The predictive power of SRH, as well as the role of the adjustment variables, varies by gender and drug groups. This knowledge is important to identify risks for later disease and to capture pathological changes before the disease diagnosis, preventing morbidity in the adult population.

**Keywords:** self-rated health; medication; medicine use; prescription drug; pharmacoepidemiology; HUNT; NorPed

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### OP085 How is quality of life measured among patients with multi-morbidity? A systematic review of existing measures.

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**Background**
Patients with two or more chronic diseases (multi-morbidity) experience high burden of disease and treatment. This influences quality of life among patients, but needs, expectations, and experiences from living with multi-morbidity have scarcely been scientifically studied. To study the effects of treatment and interventions among patients with multi-morbidity, clinicians and researchers need a patient-centered measure of the quality of life among patients with multi-morbidity.

**Objectives**
The aim is to review the literature to find existing measures of quality of life aspects among patients with multi-morbidity and to study the validity of these measures in this specific group of patients.

**Material/methods**
This review is a systematic review following the PRISMA guidelines. The process has several steps including a primary search with assistance from an information specialist using the following entry terms: Primary healthcare, quality of life, and multi-morbidity. The hits are screened by the first author and thereafter, two independent reviewers judge the eligibility of articles and inclusion in the final review.

**Results**
This is the preliminary results. The primary search had 2334 hits and 155 of these were screened as potential relevant by title. After reading all abstracts, 98 articles were left. The abstracts concern three themes: Studies assessing quality of life aspects among patients with multi-morbidity in different settings, studies assessing quality of life among patients with an index-disease and a variation of co-morbidities, and qualitative studies/reviews in the field.

**Conclusion**
The review is still under progress, and the results are preliminary, but the final results and conclusions from the review will be presented at the Nordic Congress.

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### OP086 Elimination of Genital Condyloma with Quadrivalent Human Papillomavirus Vaccine (qHPV)?

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**Objective:**
The aim of this study was to examine whether vaccination with qHPV could treat already exiting genital condyloma by eliciting a secondary immune response.

**Background:**
Genital condyloma is one of the most common sexually transmitted infections at the age of 18-30 years in both genders and 90% of the incidences are due to HPV 6 and 11 [1,2,3,4,7].

**Methods:**
During September and October 2016 search was conducted using the databases PubMed and Cochrane using search strings, free text and MeSH words „Condyloma HPV Vaccination Filters: review“, „Treatment of Condyloma with HPV Vaccination“, „Gardasil Vaccination as Treatment of Genitals Warts“ and „Clearance of Condyloma with HPV Vaccination“. Sponsored articles were excluded. 8 articles were included.

**Results:**
Several studies found that vaccination of patients who previously had been diagnosed with condyloma showed a reduced incidence in reinfection [4,6,7]. Furthermore, a large global review of vaccinated patients found that women at 20-39 years had a significant reduction of condyloma at 32%, for men at 15-19 years a reduction of 34% and, finally, no change was seen in men at 20-39 years [7].

A large RCT study with intention to treat analysis of women with prior condyloma infection also found a significant
reduction in incidence of condyloma infection at 63% after qHPV vaccination. However, the CI was very wide (CI 10.3 - 86.6) [6].

**Conclusion:**
The HPV-vaccine has so far only been used preventive. However, studies have shown that vaccination with qHPV vaccine reduced incidences of reinfection with condyloma in both genders [3,4,5,6,7,8]. Vaccination of HPV-seropositive patients with qHPV vaccine may generate a secondary antibody response and eliminate HPV virus and clear condyloma infection [4,5,6]. The million dollar question is whether we will gain anything with qHPV vaccination in regards to treatment of condyloma? Only time will tell. However - and more importantly - there is a great risk that a patient with condyloma infection already is infected with others HPV subtypes which can be precancerous. Hence, vaccination should be offered to those patients who have condyloma infection and hopefully preventing subsequent far more serious diseases.

**OP087 Looking beyond lifestyle: A circumstantial approach to social differences in health and illness practices**

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**Background**
As in most of the Western world, social differences in health status, disease prevalence and outcomes are persistent and growing in the egalitarian welfare states of Scandinavia. In Denmark, one of the fundamental pillars of the welfare state is that all citizens have free and open access to primary health care, which in theory should somehow counter these trends. However, the fact that social differences in health and illness continues to increase, raises questions as to how health and illness is practiced and how primary care is accessed.

**Objectives**
The aim of this presentation is to move our way of approaching social differences in health and illness practices in the Danish welfare state from a focus on life style to a more circumstantial approach. We do this in order to broaden our understanding of the dynamics of social differences in health status, disease prevalence and outcomes.

**Material/Methods**
The study is based on 12 months of anthropological fieldwork carried out among different social groups in Denmark, as well as an ongoing interview study with socially disadvantaged cancer survivors. The methods used are participant observation, symptom diaries and repeated interviews.

**Discussion**
In order to understand the social differences in health and illness we suggest that the focus on behaviour change and lifestyle that dominates contemporary public health interventions should be complemented with a ‘circumstantial’ approach to understand social disparities in health. Most health promotion and illness prevention initiatives focus on health and illness behaviours of individuals and specific populations, and thereby overlook the significance of life circumstances, which conditions choices and lifestyles.

**Conclusion**
In order to improve our understanding of health and illness practices it is necessary to focus on and take seriously the realities and situations in which people live. For instance, if we consider what people are actually doing in order to improve their own health or prevent illness as departing from their life circumstances, we may be able to look beyond behaviour change approaches, and thereby better understand diverging health and illness practices, as well as access to and benefits from primary care.

**OP088 Participants at the Norwegian Healthy Life Centres: Who are they, why do they attend, and how are they motivated?**

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**Background**
In accordance with the WHO’s Global Action Plan to develop targets to decrease non-communicable diseases, the Norwegian Directorate of Health recommends municipalities to establish local Healthy Life Centres (HLC). An important target is to decrease socioeconomic differences in health.

**Objectives**
The objectives are to describe baseline characteristics, reasons for attending and to explore how sociodemographic
and mediating factors relate to physical activity (PA) and sedentary behaviour at baseline.

**Methods**

The present study combines a six months RCT with a longitudinal cohort study (24 months) conducted at six HLCs in Norway from June 2014 to Sept 2017. Participants were randomized to behavioural change interventions or a six-month waiting list control group. Participants’ moderate-to-vigorous intensity PA (MVPA) recorded with an activity monitor represented the primary outcome. Socioeconomic status was defined by the participants’ highest level of education. Other questions and questionnaires were gross family income, a single item self-esteem scale (SISE), a single item self-assessed quality of childhood scale, self-support for physical activity from friends and family, self-efficacy for physical activity, Treatment Self-Regulation Questionnaire and Psychological defiance.

**Results**

From six HLCs in the western and southern parts of Norway 118 adults were included, 77% female with mean (standard deviation) age 49 (13.3) years and BMI 34 (5.8) kg/m². Mean gross family income was NOK 450.000-550.000 (50-61.000 Euro) and 57% worked full- or part-time. Only 14.8% described their health as good or very good. Fifty-five percent had upper-secondary school or less as their highest level of education. The most frequent reasons for attending were overweight, physical activity, healthier diet, and/or having musculoskeletal challenges. Significant more women reported having musculoskeletal challenges (p 0.04).

Male participants reported significantly more MVPA compared to female participants. Levels of MVPA were lowest among those with impaired self-esteem and among those with self-reported psychological problems. We found no association between education, work-status, childhood experience of respect, type of motivation, self-efficacy or nudging, and level of MVPA or time spent sedentary.

**Conclusions**

The HLCs recruit disadvantaged groups as intended by the health authorities. Disadvantaged groups reported impaired self-efficacy and lack of social support for MVPA compared with their peers. A disadvantaged status was only weakly associated with level of MVPA and time spent sedentary. Results from the six month intervention study will be presented at the conference.

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**OP089 Association of presenteeism and work engagement in Finnish municipal workers with no sickness absence**

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**BACKGROUND**

Sickness absence, absenteeism from work is associated with poor self-rated health, morbidity and mortality. Presenteeism, on the other hand, is defined as "working through illness" or decreased productivity due to health-related causes. It is associated with health-related factors such as chronic illnesses but also with many work-related factors like low job control. Work engagement is described as a positive, fulfilling work-related state of mind characterized by vigor, dedication and absorption. Little is known about the association between work engagement and presenteeism.

**OBJECTIVES**

The aim of this study was to investigate sociodemographic and clinical characters of employees, who weren’t reported sick in two years in 2014 or 2015 and their relationship with work engagement.

**MATERIAL/ METHODS**

A longitudinal study was conducted among employees of the city of Pori, in South-Western Finland in years 2014-2015. 836 employees participated in the study and follow-up visits were attended by 714 (85.4%) participants. 671 of these had a working status during the time of both study visits. Information was collected with physical examination, laboratory tests and self-administered questionnaires. Work engagement was measured by Utrecht Work Engagement Index (UWES-9) questionnaire. Absence records were collected from the employer.

**RESULTS**

Of the study subjects 149 from 671 (22.2%) hadn’t had any sickness absence in two years in 2014-15. 105 (70.5%) of them reported, that they still had, during the last year felt themselves sometimes so ill-health, that it had affected their work efficacy. The rest 44 (29.5%) of them didn’t report any presenteeism.

There were no differences between the two groups of zero-absentees in sex, age, marital, educational or occupational status. Also the use of medications, blood pressure, blood sugar, total cholesterol, occurrence of smoking and alcohol consumption, amount of sleep and leisure time physical activity were similar. However, the two groups differed in their level of work engagement. All the dimensions of Work Engagement questionnaire (UWES-9) showed statistically significant differences. In the presenteeism group the total score was 4.78 (1.05SD) and the scores were for vigor 4.80 (1.15SD), dedication 4.9 (1.06SD) and absorption 4.7 (1.22SD). In the no presenteeism group the total score was 5.21 (0.57SD), for vigor 5.27 (0.70SD), dedication 5.30 (0.63SD) and absorption 5.08 (0.83SD).

**CONCLUSION**

High work engagement to is not associated with presenteeism. People, who have the need to come to work despite feeling ill-health, don’t seem to do it because of their positive commitment to work.

**KEYWORDS:** Zero-absenteeism, presenteeism, work engagement, UWES-9
OP090 Adverse childhood experiences displayed association to depressive symptoms during pregnancy and one year postpartum

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Background
Adverse childhood experiences (ACE) contribute to several negative health outcomes in adulthood. However, little is known about the effect of ACE on depressive symptoms during and after pregnancy.

Objectives
To elucidate the associations between adverse childhood experiences and depressive symptoms reported by women in late pregnancy and 12 months postpartum.

Material/Methods
A cohort of 1,257 women was recruited at Swedish antenatal clinics and surveyed in early pregnancy and one year postpartum. ACEs were assessed by the Adverse Childhood Experiences’ questionnaire that included information on physical, emotional and sexual abuse, physical and emotional neglect, and five types of household dysfunction. The ACEs were categorised and the accumulated number of categories set to a score between 0 and 10. Depressive symptoms were measured using the Edinburgh Postnatal Depression Scale with a total score from 0 to 30. Associations were analysed by simple and multiple linear regression analyses.

Results
The majority of the women were of Swedish origin, about half had completed university education and almost all were employed and had a partner. 59% of the women reported any ACE and 12% reported 4 or more ACE categories. Depressive symptomatology was reported by almost one fourth in late pregnancy and by 12% postpartum. The number of ACE categories displayed dose-response associations with depressive symptoms in late pregnancy ($\beta$-coefficient 0.5, $p<0.0001$) and one year postpartum ($\beta$-coefficient 0.6, $p<0.0001$). These associations remained significant when controlling for possible confounding factors in multiple regression analyses ($0.4<\beta$-coefficient$<0.6$, $0.06<R^2<0.08$, $p<0.0001$).

Conclusion
Negative health outcomes in adulthood depend not only on the current lifestyle but on negative experiences during childhood. This seems true also for depressive symptoms during and after pregnancy. The selection bias of high educated and employed women of Swedish origin in the present study may underestimate the true prevalence of ACE within the general population.

OP091 Is delayed prescription a useful tool to reduce inappropriate antibiotic prescription among children?

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Background
The high and unnecessary use of antibiotics is especially common in preschool children. Delayed prescribing of antibiotics is one of more strategies to reduce use of antibiotics without influencing outcome of the patients. Delayed antibiotic prescribing means that the patient is given a prescription, but it is recommended to wait and see if the symptoms will disappear spontaneously within the next few days. If the symptoms get worse or are not reduced, the prescription should be redeemed.

Objectives
To examine general practitioners’ (GPs) views on delayed antibiotic prescribing in preschool children with symptoms of upper respiratory tract infections (URTIs), and subsequent to test the feasibility of delayed prescriptions in general practice.

Material/Methods
A questionnaire survey was developed and distributed between January and March 2015 to all 1180 general practitioners with practice located in the Capital Region of Denmark. The questionnaire contained demographic questions about gender, practice location, type of physician (GP or trainee), seniority, and practice type (single-handed or partnership practice). The questionnaire also consisted of questions about delayed antibiotic prescribing. The feasibility study was carried out between November 2016 and February 2017. 48 GPs in the Capital Region participated. In the study period, they registered the number of children with symptoms of URTIs who consult the GP, whether the child got a prescription for antibiotic, no prescription or a delayed prescription and the reason for the delayed prescription. Quantitative analyses and qualitative were performed in order to reveal barriers and potentials among GPs and parents, respectively.

Results
A total of 574 GPs (49%) responded at the survey about delayed prescribing. Almost half of the responding physicians (46%) were positive about the potentials of delayed antibiotic prescribing. About one fourth of the physicians (23%) were not positive, while a third (30%) of the physicians declared not to have an opinion on the potentials of delayed prescribing. Physicians with most experience were less likely to be positive towards delayed antibiotic prescribing. The feasibility study is ongoing and no results are available at this moment of time for submission of abstract. However, detailed results will be available at the time of the congress.

**Conclusion**

The majority of the responding physicians believed that delayed antibiotic prescriptions for preschool children with URTI could reduce antibiotic use. Therefore delayed prescription may be a strategy to use in order to reduce irrational use of antibiotic to children. The upcoming results from the feasibility study will provide new insight into delayed prescriptions as a suitable strategy.

**OP092 Improving quality of Primary Health Care for refugees - a review of literature**

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**Background:**  
The provision of healthcare for asylum seekers is a crucial issue in many countries. To date more than 60 million people are displaced around the world. For host countries, this implies huge challenges for the health care system. However by supporting GP primary health care for refugees can be improved. For providing cultural sensitive and high quality primary care, it is important to understand relevant determinates and therefore to collect existing recommendations.

**Objectives:**  
The objective of this review was to highlight determinates for primary care and to define recommendations how the general practice might be improved.

**Methods:**  
We conducted a review searching Pubmed using the MeSH-terms: „refugees” including „asylum seekers” and „primary health care”, „general practice”, „family practice”, „quality indicator”, „guidelines”. This was supplemented by additional hand search for grey literature. Titles, abstracts and full text in English French, and German were screened. Last step was to link the identified determinates with recommendations literature suggested.

**Results:**  
From 908 papers, 338 were fully reviewed, 50 were included. Main areas which were identified were: determinates such as language, knowledge about the health system, barriers in health care access, doctor-patient-relationship and cultural differences, recommendations on all levels of health care could be found and examples for best practice e.g. the government-funded Translating and Interpreting Service (TIS National) in Australia, a telephone interpreter service, which GP can use during consultations.

**Conclusion:**  
Main finding is that there are well known topics for improvement for primary care for refugees. However there is a major implementation gap between these findings and daily practice.

**Keywords:** Refugees, general practice, primary health care, quality improvement

**OP093 Does Time matter? - a randomised, single blinded intervention study on consultation length**

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**Background:**  
The physician-patient consultation is a core ingredient in general practice. It is difficult to study important aspects of the consultation due to methodological issues. However, many studies suggest that a good consultation, including a high level of patient centeredness, have a major impact on the medical and the psychosocial outcome, as well as satisfaction and enablement of the patient. As described in the Kalymnos method, the consultation process starts already when the patient prepares for the appointment. It has been suggested that the provision of information before the appointment could help patients to prepare, thus leading to an improved consultation and patient outcomes. Though, most available studies in this area have not showed any significant effect. In our daily clinical practice in Sweden many patients are not aware of the time available for the consultation. As the effect of informing about the consultation time frame when appointments are scheduled has not been studied, we wanted to examine this further.

**Objectives:**  
The aim of this study was to investigate if giving the patient an exact time frame for the consultation affects actual
consultation time, patient satisfaction and/or enablement as well as physicians’ experiences of the consultation.

Methods
Consecutive patients >18 years of age at four primary health care centres were randomised to an intervention group or a control group when scheduled for an appointment to a physician. Patients in the intervention group received information on the starting time and the available time frame for the appointment. The control group were given only the starting time (“business as usual”). The physicians were blinded to the intervention and the patients were not aware of that two groups existed. In this manner we tried to achieve a setting as close to double blinded as possible. The involved physicians measured time for each consultation and filled out a questionnaire. The patients were asked to fill out a questionnaire after the consultation. Patients with cognitive impairment or not speaking Swedish were excluded.

Results
Preliminary results suggest a decreased consultation time for the intervention group. Further data collection and analyses are ongoing and planned to be finished well before the congress and will be presented.

Conclusion
Preparing mentally for the appointment is probably done by most patients. It is possible that information of the time available could influence the appointment for the better.

OP094 Falsified drugs - a pilot study of experiences expressed by physicians working in primary care and emergency care in Sweden
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Background:
Falsified and illegal drugs (here: falsified) are major threats to public health worldwide, but most pronounced in low income countries. The drugs may be prescription-only drugs sold illegally (such as antibiotics, hypnotics, pain killers and hormones), sub-standard drugs (low concentrations or contamination) or completely falsified (inert or toxic compounds). As part of a larger research project with participants from Lund University, Divisions of Ethnology, and Family Medicine, we study the views of the public and of physicians on falsified drugs.

Objectives:
To perform a pilot study of experiences among general practitioner (GP) and emergency physicians (EP) and their needs of further information.

Material/Methods:
A sample of GPs and EPs responded to a short web survey. The data was analysed with descriptive statistics and comments with a qualitative approach.

Results:
The survey was completed by 100 GPs and 100 EPs. Approximately 80% of the physicians knew the term falsified drugs. The leading source of knowledge was media and patient related work. Slightly more than 1/3 of the doctors had met a patient suspected to taken such drugs, due to the medical history or symptoms, mainly narcotics or anabolic steroids. Unknown drugs prescribed abroad and giving unexpected reactions were experienced by 24% of the physicians. They also reported strange symptoms which may be caused by falsified drugs. A majority expressed that they would advise patients to avoid buying drugs at venues not certified by authorities. Few thought about reporting the suspected side effect to the Swedish Medical Products Agency. Approximately 80% of the physicians stated that they needed more knowledge and a majority preferred written information.

Conclusion:
Many physicians know that falsified drugs exist, but they have limited knowledge about how to handle a situation with suspected drugs and they want more education on the subject. The results will be used in the larger study on falsified drugs.

OP095 Why Danish junior doctors choose family medicine as future specialty
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Background and Aim:
The vitality of Primary Care demands a continued supply of qualified general practitioners.
In Denmark however we have observed a decline in the number of applicants for our GP training program. The aim of our study is to examine why Danish junior doctors choose family medicine as future specialty.

**Method:**
We carried out two focus group interviews with GP trainees followed by a national survey invited all Danish GP trainees. Two researchers, based on a ground theory approach, analyzed the interviews independently. Based on the qualitative data a survey was constructed. The survey were validated through a pilot inviting trainee doctors and experts.

**Results:**

**Qualitative data:**
Positive factors, which influenced the choice, were exposure to general practice as part the basic postgraduate training programme and a high-quality specialist-training programme. Negative factors were limited awareness of family medicine during medical school and worrying expectations to the future working conditions.

**Quantitative data:**
The response rate of the questionnaire was 61.0% (670/1099). The female/male ratio was 3.0. In relation to design of education, 60% agreed mandatory training in general practice during basic postgraduate medical training were crucial for their choice of specialty and 91% agreed the high quality of the family medicine training programme influenced the choice.

**Conclusion:**
This study indicates that early training in general practice as part of basic training and the quality of the family medicine programme matters. However young doctors worry about future working conditions in general practice should not be ignored.

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**OP096 Accreditation of general practices in Denmark: Findings from surveys and outcomes after the opportunity to improve**

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**Background**
Accreditation of general practices in Denmark was commenced in Jan 2016 and will over three years include all physicians with the exception of those who are expected to retire within few years. Standards were developed in cooperation with the Organisation of General Practitioners. Assessment is by a half-day survey, conducted by a team consisting of one GP and one surveyor from an allied profession. 64 indicators are assessed according to a four-point scale (Met, Largely/Partially/Not Met). If all indicators are rated at one of the two upper levels, accreditation is awarded immediately. If not, the practice will have the opportunity to demonstrate improved compliance before a final decision on accreditation is made. If there are still low rated indicators, an independent committee will decide, based on a risk assessment, whether or not accreditation can be awarded. Approx 600 surveys will have been conducted by June 2017. Data from those will be available for analysis and presentation.

**Objectives**
To assess and analyse the extent to which standards are not sufficiently met, and to assess the improvements achieved at follow-up.
To examine variations across geography (five regions), practice types (single or multi-handed) and time of survey.

**Material/Methods**
Data on compliance with 64 indicators in 600 practices, and on award of accreditation. Variations will be assessed by multivariate analysis.

**Results**
Preliminary analysis of data from 344 surveys:
Number of indicators (of 64) partially or not met/Number of surveys: 0/204; 1/53; 2-5/69; 6-10/11; 11-15/2; 16-31/5
After the opportunity to improve, 98% of practices had corrected the deficits. Of the remainder, one third achieved sufficient improvements to be awarded accreditation, though with remarks.
Deficits were found in the following indicators related to good clinical practice and patient safety (top five):
- correct procedure for reprocessing medical equipment for re-use
- systems to ensure follow up on paraclinical investigations
- special efforts in relation to a self-selected vulnerable patient group
- conduct of a patient experience survey
- correct procedure for identification of patients

**Conclusion**
In a significant proportion of practices, non-trivial deficits have been found at surveys. Almost all practices were able to correct them during the follow up period. Thus, accreditation can be used to identify opportunities for improvement and can drive action to improve.
This abstract presents findings in Danish general practice accreditation, thereby supplementing the symposium „Research on accreditation in Danish general practice.„ and the „Workshop around future steps in the process for developing quality service in the General Practitioners field.„
OP097 Individuals with schizophrenia and their attendance in primary health care

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Objective:
Schizophrenia is associated with high mortality, somatic comorbidity and reduced life expectancy. The general practitioner (GP) plays a key role in the treatment of mental and physical multimorbidity, but it is unclear how much individuals with schizophrenia use primary health care. This paper aims to investigate attendance patterns in general practice for individuals with schizophrenia.

Method:
We performed a population-based matched cohort study of 21,757 individuals with schizophrenia and 435,140 age- and gender-matched references from Danish national registers. Monthly general practice visits were analysed using a generalized linear model with log link and assuming negative binomial distribution.

Results:
Individuals with schizophrenia attended their GP more than the references throughout the study period; the cases had 82% (95%CI: 78-87) and 76% (95%CI: 71-80) more visits in primary care after 1 year and 5 years, respectively. The proportion of individuals who did not attend their GP was lower for individuals with schizophrenia, except for individuals with one or more comorbid illnesses.

Conclusion:
Individuals with schizophrenia are regularly in contact with their GP. General practice could provide a platform for future research to test whether care coordination interventions can improve the treatment of comorbid somatic illnesses in individuals with schizophrenia.

OP098 Might a systematic reading of the thickest GP patient medical records improve our understanding of functional disorders?

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Background:
A large proportion of General Practitioners’ (GPs) patients experience health problems for which there are no objective findings indicating a clear diagnosis or an appropriate treatment.

Objective:
In this study, we examine the medical records of one GP relating to all his patients diagnosed with irritable bowel syndrome (IBS). Our aim was to deepen our insight into the concept of ‘functional disorder’ as it presents in general practice.

Material/Methods:
From the patient list of a male, Norwegian GP, 99 patients diagnosed with IBS from 1991 through 2008 were identified. From among these, the 20 patients whose medical records were most voluminous were selected and catalogued according to patient age and gender, other gastrointestinal diagnoses as well as all other diagnoses. The records of the remaining 79 were catalogued according to the thickness of their medical records, as well as by patient age and gender, and any record of malignant gastrointestinal (GI) disease.

Results:
Of the total of 1190 patients on the GP’s list, 8.4% had been diagnosed with IBS. A high number of disorders was noted involving a variety of organ systems, the most frequent being diagnoses involving the musculoskeletal system. During the period of the study, the 20 patients selected had undergone a total of 52 endoscopies, none of which revealed GI system malignancies.

Conclusion:
Many of Norwegian GPs’ patients fulfill the criteria for IBS. The complex health problems they present may be seen as a continuing history of pain involving various organ systems over time.
OP099 Possible relationships between childhood adversity and oral health

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Background:
During the past two decades, increasing recognition has been given to a relationship between oral health and systemic diseases. Associated systemic conditions include cardiovascular disease, diabetes, low birth weight and preterm births, respiratory diseases, rheumatoid arthritis, obesity, osteoporosis and, in particular among oral conditions, periodontal disease. Low-grade inflammation is a common denominator linking these disorders.

Methods:
Applying an anecdotal approach and an integrative view, the medical and dental histories of two women document increasing ill health subsequent to incidences of maltreatment and sexual abuse, including oral penetration, at an early age. Comprehensive oral rehabilitation was required in both cases.

Results:
These cases open for medical insight with regard to their implicit pathophysiology, when integrated with current evidence from neuroscience, endocrinology, and immunology, converging in the concepts of allostasis and allostatic load.

Conclusion:
In cases such as those presented in this paper, primary care physicians (General Practitioners, Family doctors) and dentists may be the first to identify an etiological pattern. This report underlines the importance of increased and enhanced multidisciplinary research cooperation among health professionals. Our hypothesis is that childhood adversity may affect all aspects of human health, including adult oral health.

Keywords: Oral health, systemic diseases, inflammation, General Practitioners, dentists, primary health care.

OP100 A workshop around future steps in the process for developing quality service in the General Practitioners field, based on accreditation experiences from Denmark

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Objectives:
The goals for this workshop are twofold; on the one hand, we wish to illustrate the benefits and drawbacks of using accreditation as a quality development tool, on the other we want to involve our participants in a process where alternative quality development methods for the GP field are discussed.

How may we employ the experiences collated in Denmark in a systematic process explicitly aimed at furthering our own quality development goals? Which recommendations would we in Denmark pass on to our Nordic colleagues in this regard? What would be our common goal?
The idea is to host a discussion across the Nordic countries on how to reach a quality development method that makes sense for the general practitioners AND meets the needs and requirements of our partners across the whole spectre of the health-care complex.

Background:
Overall, the Danish GP’s were not particularly enthusiastic about the whole idea of nationwide accreditation. But the attitude towards accreditation has improved considerably as it has gained momentum. To date some 97% of the surveyed clinics have been accredited. The workload involved, and the feeling of doing something which makes sense, has varied across the clinics involved. The Staff have been particularly positive in their feedback around the accreditation process, and the spinoff on the general work situation it has caused.
The accreditation model is a common basis for the quality development of ALL Danish GP clinics. It has had beneficial effects overall, but some clinics have seen it as a great challenge. It is however seen as a good starting point for innovative thinking within the field of systematic quality development.

Session content:
Short briefing into the Danish accreditation model for GP clinics
Discussion about the accreditation process: Facilitated by a workshop referee, a group of doctors who have already been through the process discuss their experiences, and what the process has led to in their clinics. The audience is invited to participate by asking questions and commenting.
Workshop: the Future in Quality Management in the GP field, and how to manage it. Which areas need our attention in a quality assurance development process? In this phase, we invite the audience to participate in the workshop, discussing, working in sub-groups and preparing their own suggestions for quality development strategies. The phase is followed by a plenum, where ideas are presented and discussed.
Recapitulation with conclusions
The workshop brings in practical experiences with accreditation and future steps in the process for developing quality service in the General Practitioners field, thereby supplementing the symposium on research-based
OP101 How Population-based Case-Mix can Facilitate the Identification of High-risk Patients to Better Target Case Management Intervention Programs

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Background
As populations age, the burden of chronic illness increases. As numerous studies have shown, most patients have multiple diseases which complicates a single care path approach. Intervention assessment may be biased if the patient’s complete health status isn’t taken into consideration. Case-mix can facilitate identifying the patients most in need of care management interventions and help recognize their morbidity profile to ensure more appropriate programs.

Objectives
Following an introduction to the concepts behind case-mix and population stratification, the results from a specific example from the United States will be presented.

Material/Methods
Population analyses were performed to assess changes in population morbidity over time and to create a population management plan. Additionally, the ACG System Predictive Models were run to identify and stratify individuals for a variety of population health management programs. Health education and promotion were offered to the patients with the lowest ACG risk scores. Patients with moderate risk scores or single chronic disease were offered health coaching resources for lifestyle management to improve health behaviors. Members with multiple chronic conditions and high ACG risk scores participated in Guided Care, a nurse-led, patient-centered, comprehensive chronic care program delivered in the primary care setting and in the patient’s home. Guided Care integrates seven successful innovations in chronic care, including disease management, case management, self-management, geriatric evaluation and management, transitional care, lifestyle modification, and caregiver education and support.

Results
Improved quality of patients’ care.
Reduced use and cost of expensive services.
Reduced family caregiver strain.
Improved physicians’ satisfaction.

Conclusion
Applying the ACG System to identify and stratify high risk patients for inclusion in care management programs enables better targeting of patients into appropriate levels of intervention programs. Applying the Guided Care Program improved patients’ quality of care, physicians’ satisfaction with care, efficiency of resource use, as well as led to desirable outcomes for other stakeholders.

Key words: Care management, case-mix, multi-morbidity

OP102 What the Doctor Will Never Know: On Multimorbidity Expressed in Space and Sociality

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Background
Older adults are increasingly living with several chronic diseases, multimorbidity, requiring ongoing medical attention. As essential self-care occurs in a context that the doctor is most often cut off from except from rare home-visits, this paper provide insight into aspects of everyday life, that, according to an elderly woman in the study, is „something that the doctor will never know”.

Objective
To investigate how multimorbidity is expressed by elderly men and women throughout space and sociality.

Methods
Five women and five men age 65-78 with multimorbidity living in a socially deprived area of Denmark was followed during 24 months of ethnographic fieldwork. The fieldwork consisted of observations and several in-depth, semi-structured interviews at the home of the patient, as well as interviews with their GP, family and other relatives. Data were analyzed following grounded theory and thematic analysis.

Results
Multimorbidity is a contextual negotiated state of body and mind, reflected by material sociality and location. (1) The visual and bodily experience of the diseases are hidden in rooms in the house meant for social engagement and...
visual in rooms considered private. As an example; it wasn’t until the researchers fourth visit at the home of one patient that the patient invited the researcher into the more private living room in the rear end of the house. Here, the patient’s diseases would be visible through effects such as a stick, pill-boxes and seat covers. Also, in here, the patient would loudly and physically express pain and muscle shakes. (2) Most of the patients wanted to ‘perform well’ for the doctor. They would undermine their struggles and not admit when the self-care was insuperable. And the doctors meeting them only in one context would not know (3) Depending on time, space and place the symptoms would either be connected to one dominating disease or to multimorbidity.

Conclusion

GP’s in Denmark are known for their close relationship with the patients and holistic approach to a healthy life, yet it is crucial that patients’ narratives are seen in the light of the specific context in order not to oversee important symptoms or need for further treatment and care.

Keywords: multimorbidity, context, material space, doctor relationship

OP103 Reasons for attending a general emergency outpatient clinic versus a regular general practitioner - a survey among immigrant and native walk-in patients in Oslo, Norway

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Background:
Continuity of health care provided by a regular general practitioner (RGP) or a specialist physician may be associated with prevention of illness and death, and reduced emergency department attendance and emergency hospital admission. Norway introduced the RGP scheme (registered list-patient system) in 2001 in an effort to provide comprehensive stability and efficiency in the general practitioner–patient relationship. In the present study we wanted to explore walk-in patients’ reasons for attending the general emergency outpatient clinic when seeing their RGP could have been a relevant option.

Objective:
To explore reasons for attending a general emergency outpatient clinic versus a regular general practitioner (RGP) among immigrant and native walk-in patients in Oslo, Norway.

Material/Methods:
A cross-sectional study using a multilingual anonymous questionnaire. We surveyed native and immigrant walk-in patients attending a government-run general emergency outpatient clinic in Oslo (Monday–Friday, 08:00–23:00) during two weeks in September 2009. We included 1.022 walk-in patients: 565 native Norwegians (55%) and 457 immigrants (45%). The main outcome measures were patients’ reasons for attending an emergency outpatient clinic versus their RGP.

Results:
Among patients reporting an RGP affiliation, 49% tried to contact their RGP before this emergency encounter: 44% of native Norwegian and 58% of immigrant respondents (p < 0.001). Immigrants from Africa [odds ratio (OR) = 2.55 (95% confidence interval [CI]: 1.46–4.46)] and Asia [OR = 2.32 (95% CI: 1.42–3.78)] were more likely to contact their RGP before attending the general emergency outpatient clinic compared with native Norwegians. The most frequent reason for attending the emergency clinic was difficulty making an immediate appointment with their RGP. A frequent reason for not contacting an RGP was lack of access: 21% of the native Norwegians versus 4% of the immigrants claimed their RGP was in another district/municipality, and 31% of the immigrants reported a lack of affiliation with the RGP scheme.

Conclusion and implications:
Access to primary care provided by an RGP affects patients’ use of emergency health care services. To facilitate continuity of health care, policymakers should emphasize initiatives to improve access to primary health care services. Policymakers should work for entitlement to the same diverse-sensitive health care service for immigrants as the rest of the population to secure equity in health care access.

KEYWORDS: Primary Health Care; General Practitioner; Patient Acceptance of Health Care; Emigrants and Immigrants; Emergency Medical Services; Continuity of Patient Care

OP104 Burnout and sleep problems among Danish general practitioners

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Background
In the population, 9-12% suffers from sleep problems lasting longer than 3 months. Sleep problems have severe consequences for health including increased risk of heart disease, depression, obesity, stroke and even death.
Burnout is characterised by emotional exhaustion, cynicism and feelings of reduced personal accomplishment. Burnout and sleep problems among general practitioners (GPs) in Denmark and internationally is increasing. Associations between burnout and sleep problems are poorly investigated among GPs.

Objectives
The objective of this cross-sectional study was to examine the association between burnout and sleep problems among Danish GPs.

Material/Methods
In May 2016, all Danish GPs (N=3409) received an electronic, personal survey examining work-related psychological well-being. The response rate was 50% (N=1713). The GPs completed the Maslach Burnout Inventory (MBI) and the Insomnia Severity Index (ISI). The MBI consists of three subscales: emotional exhaustion, cynicism and personal accomplishment. Each subscale score was categorized as low or high based on normative population scores. The dichotomized responses were combined into four ordered categories: 1. Low exhaustion, low cynicism and high accomplishment (referents), 2. Either high exhaustion or cynicism or low accomplishment (one out of three dimensions), 3. High exhaustion and/or high cynicism and/or low accomplishment (two out of three dimensions) and 4. High exhaustion, high cynicism and low accomplishment (all three dimensions). Based on predefined cut-off values, the sum scores on ISI were categorized as no insomnia and moderate to severe insomnia. Data was analysed with logistic regression adjusting for gender, age and practice type (single-handed vs. group practice).

Results
The distribution of GPs in the four burnout categories was 48, 25, 16 and 11%, respectively, and 6% reported insomnia. Burnout was associated with insomnia in a dose-response pattern with group 2-4 having significantly increased risk of insomnia compared to group 1: ORgroup 2=2.0 (95% CI=1.1-3.7); ORgroup 3=4.1 (2.3-7.4); ORgroup 4=9.21 (5.2-16.3).

Conclusion
The results revealed a clear association between burnout and sleep problems. Since stress causes sleep problems and conversely - less time spend on personal recovery increases risk of burnout, the causality is probably bidirectional. This might imply that the sleep-burnout downward spiral could be broken by either decreasing job demands or increasing sleep hygiene.

OP105 Burnout among Danish General Practitioners - results from a nationwide questionnaire survey

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Background
High prevalence of burnout has been found among general practitioners (GPs), also in Denmark. In a survey from 2012 one in four Danish GPs fulfilled criteria for burnout. Concerns have been raised that the prevalence of burnout may have increased further.

Objectives
To examine the prevalence of burnout and its associated factors among GPs in Denmark.

Material / Methods
A cross-sectional questionnaire survey on work-related psychological well-being was carried out among all GPs in Denmark in May 2016. The questionnaire included scales on burnout and questions about GP and practice characteristics, work hours, and potential strains in the job. Burnout was measured by the Maslach Burnout Inventory (MBI). MBI includes three subscales: exhaustion, cynicism, and perceived efficacy. Moderate burnout was defined as a high score on the exhaustion subscale and/or a high score on the cynicism subscale. Severe burnout was defined as a high score on both these subscales as well as a low score on the perceived efficacy subscale.

Results
The response rate was 50.7% (1.730/3.409). Of participating GPs 10.5% reached the criteria for severe burnout and further 28.3% reached the criteria for moderate burnout. There was no significant differences in burnout with regard to gender, practice type (single handed vs. group practice), or across regions. The rate of burnout was lower among GPs aged > 55 years (33.0%) compared to younger age groups (45-54 years (42.0%) and < 45 years (41.0%)).

Conclusion
One third of participating GPs reached criteria for burnout. Burnout affected GPs equally across genders, practice type and region. Age <55 years and more hours of clinical work were associated with higher levels of burnout. Burnout was strongly associated with GPs reporting that quality of work was often or always affected by high job demands. GPs having a hard time letting go of the job, and GPs feeling lonely in the job. The results confirm the concern of increased burnout among Danish GPs and call for efforts to improve their work related well-being.
OP106 Experiences of problems and needs among young adults with common mental disorders and psychosocial problems

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Background
An increasing number of young adults in Denmark have difficulties finishing an education or getting a job because they have common mental disorders and psychosocial problems. The medical responsibility for these young adults lies in general practice, and in addition the young people sometimes receive treatment in the psychiatric sector. The municipalities are responsible for helping the young adults become ready for education or work. This is done through ‘activation programmes’ which the young adults must attend in order to receive welfare payments. Studies have shown that cross-sectorial collaboration is important when treating young adults with mental illness, but also that this collaboration is not always well-functioning. There is a lack of knowledge about how the current efforts made in the health- and social system to help the young adults are experienced by the young adults themselves.

Objectives
To investigate how young adults with common mental disorders and psychosocial problems experience their own problems and needs, and to what extent the help they receive from the municipalities, general practice and the psychiatric sector corresponds with these needs.

Methods
Data is collected through an anthropological fieldwork among young adults with common mental disorders and psychosocial problems, who have attended numerous activation programmes in the municipality without success. The fieldwork takes place in two municipalities and consists of participant observation in two activation programmes and semi-structured interviews with 12-15 young adults from the target group who have been recruited through the activation programmes and general practice.

Results
Data collection is in progress. Preliminary results show that while some informants agree with their diagnoses and the treatment they receive from their GP and the psychiatric sector, others have got diagnoses which they do not identify with, and yet others feel their psychological problems are not acknowledged and that they receive too little treatment for them. In addition, some informants’ understandings of their condition and its’ consequences differ from those of the social workers in the municipalities and they have different perspectives on what constitutes meaningful activation.

Conclusion
Several of the informants experience discrepancies between their own understanding of their problems and needs and the understandings held by professionals in the municipalities, general practice and psychiatry. These discrepancies should be dealt with in order to establish a concerted effort which is meaningful both for the young adults and the involved professionals.

Keywords: Mental health, young adults, cross-sectorial collaboration.

OP107 What happens when the doctor denies a patient’s request? A qualitative interview study among general practitioners in Norway

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Background:
The doctor-patient relationship has undergone a great transformation during the last decades: A paternalistic tradition has been challenged, and ideas of patient-centered communication and shared decision-making have developed gradually. It has been argued that the doctor today acts more like a passive provider who merely presents different options from which the patient may choose, and Pellegrino has stated that this development, with growing authority of patient autonomy, poses a threat to the doctor’s professional autonomy. When the two are in conflict, the patient’s wish does not inevitably overrule the doctor’s, as certain areas are indisputably regulated by law or medical guidelines and as such not negotiable. These dilemmas are especially challenging in general practice, where long-standing and close relationships may add further strain to such encounters. Objectives: To explore GPs’ experiences from consultations when a patient’s request is denied, and outcomes of such incidents

Material/Methods:
We conducted a qualitative study where data were obtained through individual semi-structured interviews with a purposive sample of six experienced GPs in Norway, three of each gender. The participants were invited to describe specific consultations where they, for good professional reasons, had refused their patients’ requests. Analysis was
carried out by using Systematic Text Condensation, a method for thematic cross-case analysis. Analysis was supported by Pellegrino’s perspectives, focusing on the participants’ experiences of the conflict between shared decision-making and professional autonomy in regard to the patient-doctor relationship.

**Results:**
Preliminary results from analysis deals with reasons for encounters that led to dispute, how the arguments unfolded and ended, the emotional impact of the incident upon the doctor, and consequences of the dispute, especially related to the doctor-patient relationship. Further details will be presented at the conference.

**Conclusion:**
The preliminary results suggest that disputes of this nature are regarded as very uncomfortable by PG, and may cause many negative effects, especially for the doctor-patient relationship. GPs seem to lack skills pertaining to this particular challenge, and will need more education and training in this field.

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**OP108 Vitamin D deficiency was common among Swedish nursing home residents and associated with dementia**

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**Background**
Residents of nursing homes may have low 25-hydroxyvitamin D (25OHD) concentrations. The associations between vitamin D and cognitive performance, dementia and susceptibility to infections are not clearly established.

**Objectives**
To investigate the prevalence of vitamin D deficiency and identify associated factors.

**Material/Methods**
Design: Cross-sectional study. Setting: Residents of Swedish nursing homes for the elderly. Patients: From January to March 2012, blood samples for analysis of 25OHD were collected from all participating residents. Exclusion criteria: dementia too severe to be able to take a blood test, terminally ill or refusing participation. Outcome measures: Serum 25OHD concentrations. Logistic regression to evaluate factors associated with vitamin D deficiency (25OHD <25nmol/L).

**Results**
Blood samples were obtained from 545 of 901 residents of 22 nursing homes. Mean age 86 years (SD 6.9), 68% were women. Prevalence of vitamin D supplementation 17%, dementia 55%, lack of appetite ≥3 months 45% and any antibiotic treatment during the last six months 30%. Serum 25OHD concentrations: mean 34 nmol/L (SD 21, median 27, range 4-125), 82% (448/545) had 25OHD <50 nmol/L and 41% (224/545) had 25OHD <25 nmol/L. Adjusted OR (95% CI; p-value) for possible predictors of vitamin D deficiency (25OHD <25nmol/L): vitamin D supplementation 0.075 (0.031-0.18; p<0.001), lack of appetite ≥3 months 0.75 (0.50-1.1; p=0.15), hours outdoors/week 0.99 (0.96-1.0; p=0.82), Fitzpatrick skin phototype (four to six) 0.69 (0.44-1.1; p=0.12); dementia 2.3 (1.5-3.4; p=0.001) and antibiotics last six months 1.6 (1.1-2.6; p=0.029), adjusted for age and gender.

**Conclusion**
Vitamin D deficiency was common among nursing home residents and strongly associated with dementia. Regardless of causality or not, it is important to be alert for vitamin D deficiency in nursing home residents with dementia. As expected vitamin D supplementation predicted less vitamin D deficiency, however appetite, staying outdoors and skin phototype were not significant predictors in the model. Antibiotic treatments during the last six months were associated with vitamin D deficiency, potentially supporting the hypothesis that vitamin D deficiency is associated with susceptibility to infections.

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**OP109 PHYSICIANS AND FACEBOOK - VIEWS OF SLOVENIAN PHYSICIANS**

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**Background:**
Facebook (FB) is a social network which already has over 1,7 billion users, more than a half of whom are daily users. Some researchers believe that physicians’ FB profiles may threaten the physician-patient relationship, in particular if they are not using the security features correctly.

**Objectives:**
The aim of our study was to determine how many Slovenian physicians in the Maribor region has an FB profile and how many of them use FB profile security features. To continue, we also wanted to learn their opinions regarding the criteria for adding someone as their FB friend (whether they are also adding their patients as their FB friends).

Material/Methods:
We conducted a quantitative, cross-sectional study using a randomized sample of physicians of all levels (apprentices, residents and specialists) and all specialities from the Maribor region in Slovenia. We used a survey containing structured closed-type questions about basic demographics and the use of FB, including two additional open-type questions at the end of the survey.

Results:
78% (47 out of 60) apprentice physicians, resident physicians and specialist physicians responded to the survey; of these, 64% were women (30 out of 47) and 36% were men (17 out of 47). The mean age of respondents was 36 years (range 25-53 years). Most of the respondents were specialist physicians (60%), followed by resident physicians (25%) and apprentice physicians (15%). Among these specialist physicians, 53% were family medicine specialists.

When asked if they have an FB account, 53% of all respondents answered affirmatively. However, only 24% (6 out of 25) of all those physicians who have an FB profile reported to also having their patients among their FB friends. Only 12% (3 out of 25) of all asked add or accept people as friends even if they do not know them. As many as 98% (46 out of 47) of the respondents think that physicians should be careful about what they post on FB. Approximately 77% (36 out of 47) of them think it is inappropriate for the physicians to be friends with their patients on FB.

Conclusion:
Facebook (FB) is a powerful tool for maintaining private and business contacts online. However, it lacks human contact, which is crucial in the physician-patient relationship. The majority of physicians agreed that private life should be separated from professional life, also expressing concerns regarding the potential abuse of their personal information.

Keywords: Facebook, physicians, professional relationship, safety of personal information

OP110 How is the professional and the personal network activated when experiencing a symptom in the general population?

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Background
As a health professional in the frontline, the general practitioner (GP) touches upon different kinds of contacts, and assessment of symptoms is a main task in primary care. However, continuing research has illustrated that symptoms presented to the GP represent only a minority of the total symptom pool experienced by people in the general population. Disclosure of a symptom to a family member or friend has been identified as a facilitator in the decision to seek medical help with an alarm symptom of cancer. We do, however, only have sparse knowledge of whom people engage with when experiencing a potential symptom.

Objective(s)
Departing in Pescosolido and colleagues’ work on social network activation, the objective of this study is to describe the activation of personal and professional network with regard to symptoms experienced in the general population.

Material/Methods
The study was conducted as a Danish nationwide cross-sectional study including a random sample of 100,000 individuals, aged > 20 years. Data was collected from a web-based questionnaire with the overall concept of measuring the prevalence of symptom experiences in the general population and to explore dimensions related to healthcare seeking behaviour. Items regarding the use of personal and professional relation were included.

Results
A total of 44,313 individuals answered all the relevant items which form the basis for this study. Overall 260,079 symptoms were reported. A professional relation was deselected in 65.8% of the symptoms. The most frequently used professional was the GP (22.5%). People reporting to have a social network were less inclined to contact the GP (21.9%) when experiencing a symptom compared to people who reported to have no social network (26.8%).

People most often engaged with a spouse or partner (56.4%) or friends (19.6%) when experiencing a symptom. A combination of contacting the GP and the spouse or partner was the most activated pattern in general when experiencing a symptom. There was some variation in whom or which network people chose to contact for individual symptoms experienced. The symptoms with the highest proportion of neither personal nor professional relations were symptoms as black stool, constipation, change in stool texture and frequent urination.

Conclusion
This study emphasises variation in the activation of network when experiencing a symptom. Despite having an available network or not, the GP was included in approximately a fourth of all symptoms. For symptoms derived from the urogenital or colorectal region, the use of both personal and professional relations was relatively small, which might indicate reticence to involve other people when experiencing symptoms from these bodily regions.
OP111 Nordic general practitioners’ role in the treatment and follow-up of common medical conditions.

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Background
General practitioners (GPs) are important contributors in the health care systems of all the Nordic countries. Substantial organizational differences exist between the countries, and may affect the GPs role in disease management.

Objectives
We aim to describe the GPs’ self-reported involvement in the treatment and follow-up of a selection of medical conditions. We explore possible explanations for the differences found between the Nordic countries.

Material and Methods
The study Quality and Costs of Primary Care in Europe (QUALICOPC) took place in 34 countries in 2011-2013. We used data from the Nordic part of the study. All participating GPs completed identical questionnaires concerning their practices. They were presented with 12 medical conditions and asked to indicate to what degree they were involved in the treatment and follow-up of these conditions.

Results
875 GPs (198 Norwegian, 97 Swedish, 212 Danish, 288 Finnish and 80 Icelandic) participated in the study. We found significant associations between the GPs’ participation in treatment/follow-up and the GPs’ sex, as well as with the practice distance to hospital. More than 90% of the GPs in all five countries were involved in the treatment/follow-up of bronchitis, pneumonia, diabetes type 2 and depression. Norwegian GPs were significantly more involved in the treatment/follow-up of rheumatoid arthritis than the GPs in Sweden, Denmark and Iceland. They were also more involved in the treatment/follow-up of patients with Parkinson’s disease than the GPs in Denmark and Iceland. Icelandic GPs were less involved in the treatment/follow-up of heart failure and myocardial infarction than GPs in all the other countries. Further details will be presented at the congress.

Conclusion
Common conditions like bronchitis, pneumonia and diabetes type 2 were handled by virtually all the GPs in the five Nordic countries. Larger differences were seen for more uncommon conditions, e.g. Parkinson’s disease and rheumatoid arthritis. Reasons for the observed differences may be sought among organizational differences, including gate-keeping and remuneration systems.

OP112 Does cardiorespiratory fitness assessment in preventive health checks increase cardiorespiratory fitness among middle-aged Danish adults? Randomised controlled trial with one-year follow-up.

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Background:
Poor cardiorespiratory fitness is a major contributor to morbidity and premature mortality. Yet, cardiorespiratory fitness assessment is not offered in current primary health care, and the effect of such practice on cardiorespiratory fitness is unknown.

Objectives:
To investigate the effect of cardiorespiratory fitness assessments included in population-based preventive health checks offered in collaboration with general practitioners.

Methods:
In a randomised controlled trial, we included 2,201 middle-aged adults of 4,153 invited who received a preventive health check with (intervention) or without (control) cardiorespiratory fitness assessment. Participants were re-examined after one year. The primary outcome were adjusted absolute (L/min), relative (ml/kg/min) and poor (%) CRF at one year assessed using the Astrand-Ryhming test. Secondary outcomes were self-reported physical inactivity prevalence at one year and self-rated physical and mental health change from baseline to one-year follow-up. Intention-to-treat analysis was performed with adjustment for baseline physical activity and intracluster correlation within general practices.

Results:
Of the 2,201 study participants, 901 participants were re-examined at one year and included in the primary analysis. Absolute and relative CRF as well as poor CRF at one year were 2.7 L/min (95% confidence interval [CI] 2.6 to 2.8), 34.5 ml/kg/min (95% CI 33.5 to 35.4), and 31.0% (95% CI 26.8 to 35.2) in the intervention group and in the control group 2.8 L/min (95% CI 2.7 to 2.9), 35.2 ml/kg/min (95% CI 34.2 to 36.1), and 25.9% (95% CI 21.8 to 30.0). Adjusted absolute CRF was lower in the intervention group (−0.1 L/min [95% CI −0.2 to −0.01]), while adjusted relative CRF (−0.7 mL/kg/min [95% CI −2.0 to 0.6]) and poor CRF (5.0% [95% CI −0.002 to 10.1]) did not differ between groups. No between-group differences were found in self-reported physical inactivity prevalence (−0.7% [−3.3 to 1.9]), self-rated physical (0.1 [−0.8 to 1.0]) or mental health change (0.5 [−0.9 to 1.8]).

Conclusion: Among attendants in a population-based preventive health check program rooted in general practice, including CRF assessment in the health checks did not result in higher CRF, lower self-reported physical inactivity, or improved self-rated physical or mental health at one-year compared with preventive health checks without CRF assessment. Trial registration: ClinicalTrials.gov Identifier: NCT02224248.

Keywords: cardiorespiratory fitness, exercise test, health examination, physical activity, health behavior, randomised controlled trial.

OP113 Alcohol and cancer
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The Swedish Medical Society, SLS, together with the temperers order, IOGT-NTO, has initiated a project, „Alcohol and the Society“, with the aim to present an annual research report. The main theme each year is suggested jointly by the Swedish Medical Society, represented by the Swedish College of General Practice, IOGT-NTO and an international research team. The earlier reports focused on „Youth and alcohol“, „Health effects och moderate drinking“ and „Alcohol and effects in second hand“. The actual report from december 2016 report summarizes and examines the latest scientific evidence alcohol causing cancer. The report and the popularized booklet are written by an international research team including leading alcohol researchers from the US, Canada, Australia and Sweden.

The presentation will reveal new evidens and social aspects on the subject alcohol and cancer that will be useful for every general practitioner

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Background: Previous studies in adolescents have rarely used validated questionnaires to assess stress and psychiatric symptoms.

Objectives: The first aim of this study, which was conducted in 2011, was to examine the prevalence and potential sex differences of perceived stress and psychiatric symptoms among Swedish upper secondary school students for comparison with Swedish reference populations from 1996 and 1998. The second aim was to examine the correlation between perceived stress and psychiatric symptoms in 2011.

Methods: Perceived stress and psychiatric symptoms were measured in 194 Swedish students, aged 15-19 years, with the validated questionnaires Perceived Stress Scale (PSS-14) and Symptoms Checklist 90 (SCL-90). PSS-14 data were compared with data from the 1996 study. SCL-90 data were compared with a large Swedish reference sample from 1998. clinicaltrials.gov: NCT01457222.

Results: Significantly higher PSS-14 scores (more stress) and Global Severity Index scores (from SCL-90) (more psychiatric symptoms) were found in both sexes compared with the reference groups. Although no sex difference was found in perceived stress, female students showed more psychiatric symptoms than male students. Perceived stress and psychiatric symptoms were well correlated (p=0.67).

Conclusion: Using validated scales, this study shows that Swedish adolescents reported higher levels of perceived stress and psychiatric symptoms in 2011, in comparison with Swedish reference populations from 1996 and 1998. Girls reported more psychiatric symptoms than the boys. Future studies could examine which strategies are useful to help young people improve in coping with stress and to prevent associated psychiatric symptoms.
Background: Psychiatric symptoms and stress are on the increase among Swedish adolescents. Internet-based Psychotherapy (iPT) seems to be a promising treatment alternative to address this issue. We aimed to study the potential effect and feasibility of two iPTs; one mindfulness-based (iMBI) and one music-based in a randomised controlled trial that targeted adolescents.

Methods: A total of 283 upper secondary school students, in two Swedish schools, were randomised to either waiting list or to one of two iPTs, on their own incentive, on school-time. General psychiatric health (Symptoms Checklist), Sleep Quality (Pittsburgh Sleep Quality Index), and Perceived stress (Perceived Stress Scale) was assessed before and after the intervention.

Results: The questionnaires were answered by 202 participants. Less than 20 logged in to each iPT and only one performed a full intervention (iMBI). No significant difference was found between active (defined as having logged in to the intervention) and inactive participants in any of the scales.

Conclusion: The potential effect of the iPTs was not possible to examine due to low compliance rates. Adolescents seem to have a very low compliance with iPTs if left to their own incentive. We found no association between the psychiatric and stress-related symptoms and compliance in any of the intervention groups and no evidence for differences in compliance in relation to the type of iPT. Additional studies are needed to examine how compliance rates can be increased in iPTs on adolescents as the potentially
behaviour and mental illness.

**OP118 Early detection at the GP’s of perinatal depression in mothers and fathers to be**

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**Background**

The Danish Health Authority (1): „The incidence of postpartum depression has been found to be about 10% in mothers up to 6 months after birth and about 6% in the fathers“. Men and women’s pre- and postnatal depression may have impact on a child’s social-emotional development. There is a need to detect and treat the depression as early as possible to avoid negative effects on the child.

**Objectives**

The objectives of the project were to investigate whether
- perinatal depressions are detectable during pregnancy
- it is possible to identify fathers with perinatal depression,
- it is possible to conduct a screening at the GP’s in the 24th week of pregnancy,
- the mothers and fathers to be, who score above the cut off, want to be offered psychotherapy.

Finally, it was the aim to compare prevalence and symptoms of perinatal depression among parents to be with parents 6 to 8 weeks after the birth of their child.

**Material/Methods**

30 practitioners in the City of Copenhagen have in a 1½ year period screened 1,204 expectant mothers and fathers for perinatal depression in the women’s 24th week of pregnancy. The screening instrument for both parents was a combination of the Edinburg Post-Natal Depression Scale (2) and the Gotland Scale of Male Depression (3) with selected questions from The Masculine Depression Scale (4) and the Father Attachment Interview (5).

All respondents who scored above the cut off were referred to psychological treatment before the child’s birth. At the same time, statistical data were collected for exploration of the occurrence of depression, symptom profiles and gender differences.

**Results and Conclusion**

In 1204 screenings in the 24th week of pregnancy a total of 9.8% scored above cut off, i.e. 11.1 % of women and 8.0 % of men. The project is unique internationally in examining whether it is possible in general practice to detect signs of postpartum depression during pregnancy and in screening fathers to be for perinatal depression. We conclude that it is possible to detect postpartum depression already during pregnancy. After completing analyses, it is expected to form a basis for introducing screening parents to be for perinatal depression in general practice.


**OP119 How to talk with patients about alcohol?**

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According to WHO alcohol is one of the three most important risk factors of early disease and death in Europe. Excessive alcohol consumption can lead to different health related, psychological and socioeconomic problems and as family physician we see those consequences upclose. Prevention is an important part of family medicine and primary care physicians are in a position to address heavy drinking and alcohol use disorders with patients, and can do so quickly and effectively. Evidence shows that family doctors don’t ask their patients about alcohol as often as they should. In a study conducted in 2015 in Estonia only 6% of responders said that a doctor or a nurse asked them about alcohol consumption, at the same time 66% of them were asked about tobacco use. But how we can help our patients if we even don’t ask about alcohol in general?

**The main aim** of this workshop is to give family doctors knowledge and specific tools on how to start a conversation with a patient about alcohol and how to screen for alcohol use disorders. In the workshop we will explore what kind
of difficulties are we facing in starting the conversation and what can we do about it. We will also discuss when and how to start the conversation and at the end introduce different screening tools.

OP120 Psychopharmacological treatment and follow-up on the increased cardiovascular risk - results of an audit in Danish general practice

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Background:
All psychiatric diagnoses are associated with increased mortality and the most frequent cause of death is cardiovascular disease. Compared to the background population, patients who are treated with psychotropic drugs have higher frequency of modifiable cardiovascular risk factors and the drugs themselves may cause lethal cardiac arrhythmia and metabolic side effects. Thus, close follow-up is recommended.

Objectives:
To investigate to what extent Danish GPs follow-up on the increased cardiovascular risk of patients who are prescribed with psychotropic drugs.

Material/Methods:
All GPs in the region of Southern Denmark and their clinic staff were invited to participate in a four-week audit. According to the Audit Project Odense method GPs recorded information on all patients who attended the clinic and were users of psychotropic drugs. Staff members recorded all patients who called, E-mailed or showed up for prescription renewal on psychotropic drugs. Participation was voluntary, unpaid and free of charge. It included a one-day course where the results of the audit were presented.

Results:
In total 24 practices participated. Fifty GPs (six % of the invited) included 1.714 patients and 40 members of staff included 803 patients. The most frequent psychiatric diagnosis was depression (58%), followed by anxiety (22%) and sleeping disorder (17%). Seven % of the patients were diagnosed with schizophrenia/psychosis. More than one psychiatric diagnosis was allowed per patient. About half of the patients were known to have diabetes, cardiovascular disease, hypertension, hypercholesterolemia or severe obesity. In 82% of the patients the GP was primarily responsible for the treatment, and for 78% the GP considered that follow-up had been conducted appropriately. Within one year before the registration date, electrocardiogram had been performed in 44% of the patients, blood pressure measured in 64%, and BMI measured in 39%. BMI was measured more often in patients treated with drugs prone to cause weight gain (e.g. mirtazapine or olanzapine), but electrocardiogram and blood pressure was recorded with the same or higher frequency in patients with safe medication (e.g. sertralin 48%) compared to more risk full medication (e.g. clorprothixen 31%). Only 4.6% of the patients had had a measurement of abdominal circumference. Staff members recorded that 64% of the patients who requested prescription renewal had had at least one consultation regarding the psychiatric treatment within the previous year.

Conclusion:
Most patients who Danish GPs treat with psychotropic drugs have appropriate follow-up on the cardiovascular risk. However, there is considerable room for improvement.

Key words: Psychotropic drug, cardiovascular risk, follow-up and audit.

OP121 Quality improvement and research development in general practice - HAPPY AUDIT as an example

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Background:
The Health Alliance for Prudent Prescribing, Yield And Use of Anti-microbial Drugs In The Treatment of Respiratory Tract Infections (HAPPY AUDIT) started in 2007 as a quality improvement initiative aimed at improving the quality of diagnostic procedures and treatment of acute respiratory tract infections in general practice. Since then, HAPPY AUDIT has been implemented in 14 countries namely: Denmark, Sweden, Lithuania, Russia, Spain, Argentina, Bolivia, Uruguay, Paraguay, Estonia, Latvia, Poland, Belarus, and Moldova.

Objectives:
To describe the evolution of the methodology and the impact on reducing the unnecessary use of antibiotics and increasing the body of knowledge on the use of antibiotics in general practice across differing contexts.

**Material/Methods:**

HAPPY AUDIT follows The Audit Project Odense (APO) methodology. It is a medical audit divided in the following phases: a) planning, with a protocol and a pilot registration, b) first audit registration, c) follow-up meeting with open debate and critical analysis to identify quality problems and determine intervention targets, d) follow-up activities and implementation, e) second audit registration, f) evaluation. Before-after analysis, cluster randomized controlled trials, and qualitative research studies have been implemented alongside the quality development cycle to develop targeted interventions and assess the effect of these interventions.

**Results:**

About 1000 general practitioners (GPs) from 14 countries have participated in the quality improvement program. In all projects, a substantial reduction in antibiotic prescription has been achieved. It has had a greater impact in the group of GPs from countries with a very high use of antibiotics. For example, in Bolivia, there was a 12% (95% CI 9; 14) reduction in the overall prescription of antibiotics. Qualitative research has demonstrated that GPs need support from the health authorities to achieve a greater decrease in the inappropriate prescription of antibiotics. Quantitative analyses have demonstrated that the introduction of point-of-care tests in general practice reduces unnecessary prescribing of antibiotics (OR 0.12, 95% CI 0.01; 0.32). Changes in prescribing behavior remain even several years after participating in the quality improvement program.

**Conclusion:**

The bottom-up approach in which GPs themselves prioritize a clinical problem, and its easy-to-use registration format have been crucial to succeed in the widespread use of the APO methodology. HAPPY AUDIT has contributed with valuable knowledge on the decision-making process for the use of antibiotics in general practice and has helped to decrease the inappropriate use of antibiotics across different contexts.

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**OP122** Elderly users' of Fall Risk Increasing Drugs perceptions of fall risk and the relation to their drug use - a qualitative study

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**Background and objective**

Elderly persons are more prone to falls and injuries caused by falls are one of the leading causes of death in elderly. The use of Fall Risk Increasing Drugs (FRIDs) has been shown to increase the risk of falls even when adjusted for chronic disease status. The aim of the study was to explore how home dwelling elderly FRID users perceive their fall risk and how they relate this to their drug use.

**Methods**

A qualitative study with 14 home-dwelling elderly FRID users between 65 to 97 years participating in semi structured individual interviews. The data was analyzed thematically by using systematic text condensation.

**Results**

The main finding was that the informants did not necessarily perceive the use of FRIDs to be a prominent risk factor for falls. Some informants said they did not reflect upon drug use whatsoever and said they fully trusted their physician's choices. When suspecting their drug through either experiencing dizziness, fall episodes or by reading the patient information leaflet the informants said to either adjust their drug use or to contact their physician. When contacting the physician there were informants that felt rejected due to not getting their point across or the wish to alter the drug was not granted by the physician.

**Conclusions**

The results from this study indicates that since elderly FRID users not necessarily relate their drug use to fall risk and also may struggle to present their perceived drug related problems, the physicians therefore need to regularly inform, monitor and assess the drug treatment when treating with FRIDs.

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**OP123** Small group based learning in systematic CPD, patients with multi-morbidity.

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**Background**
Denmark has reformed its continuing professional development (CPD) for general practitioners (GPs). The Danish CPD programme now consists of a combination of reimbursed activities based on individual need analyses and on a common consensus based curriculum. The development of the consensus-based curriculum enrolled several stakeholders including GPs, GP researchers, hospital consultants, GP educators and administrative staff. A part of this new curriculum is the treatment of patients with multi morbidity. In the implementation phase six groups of GPs were trained in this specific topic in a small group learning format.

**Objectives**
To explore the feasibility of small group learning in training the treatment of patients with multi morbidity in general practice.

**Material/Methods**
A group of educational advisers developed two complex patient cases. These cases were used in four sessions in two GP learning groups. Local experts were invited to participate the sessions. In both groups, the first two sessions dealt with medical competences and the two following sessions dealt with topics such as psychosocial issues, patient empowerment, collaboration and clinic organization.

Based on questions generated by the discussions in the two first groups, we developed video clips with expert statements and educational material addressing the questions. The process was then repeated in four new groups. Two observers evaluated each of the first eight sessions. The following 16 sessions were evaluated by telephone interviews with participants from the four groups. The interviews were performed after a semi structured guide by a researcher, who didn’t take part in the course development. Two researchers analyzed the written evaluations from the observers and the interviews in an open-minded ground theory like approach.

**Results**
The small group learning format was highly valued. All the participants felt professional stimulated, and individuals with divergent knowledge were moved towards a mutual professional understanding. The participants experienced the sessions improved their professional capacity and expected the sessions would have a positive impact on their future clinical practice.

**Conclusion**
Small group learning seems to be a feasible format for training treatment of patients with multi morbidity, and probably also other systematic CPD topics if high quality educational material is available.

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**OP124 Emergency Physicians’ Empathy: Perceptions of Patients and Their Physicians**

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**Background:**
Empathy is the ability to understand an individual’s subjective experience by sharing it while maintaining an observant stand. In spite of its positive impact on the physician-patient relationship and the health outcomes, physicians face barriers to expressing empathy. Improving empathic communication requires studying both the physicians’ and their patients’ perspectives. To date, only one published study tackles empathy in the emergency department from this angle.

**Objectives:**
The aim of this study was to investigate the perspectives of both physicians and patients with regard to emergency physician empathy in order to assess if there are any differences in those perspectives and offer possible recommendations should this gap prove to exist.

**Methods:**
Semi-structured in-depth interviews were held at the low acuity emergency department with 14 patients and 7 physicians. Qualitative analysis of the data was done through the interpretive phenomenological approach.

**Results:**
Four major themes surfaced: 1. Patients wanted physicians to ask, address and express emotions but physicians rarely did; 2. Patients emphasized the importance of medical knowledge, good communication skills as well as the physician’s friendly character while physicians mainly focused on medical knowledge; 3. Physicians agreed that they should show empathy in the emergency department but considered time as the major barrier; 4. Physicians acknowledged that empathy is related to the chief complaint not the patient while patients wanted to be empathized with even if they are coming for a minor complaint.

**Conclusions:**
There is a gap between the patients’ and their physicians’ perspectives with relation to the communicative and interpersonal aspects of empathy. Efforts are needed from both sides to improve empathy. We offer recommendations to bridge the gap and ensure more empathy is practiced and thus better patient care precisely because we believe that empathy is a very important part of medicine.
OP125 Complex interventions - how to evaluate and pitfalls to be aware of?

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Background
Complex interventions are increasingly used in quality improvement in health care. These interventions are characterized by numerous and interacting components, flexibility and tailoring and interaction with context.

Objectives
To highlight issues concerning the evaluation of complex interventions that should be considered by researchers and intervention developers and perhaps by general practitioners participating in the interventions.

Material/Methods
With guidelines from the UK Medical Research Council on how to evaluate complex interventions as a point of departure, I will discuss challenges of complexity in the evaluation of complex interventions both more broadly and by using examples from a study of a facilitation intervention conducted in general practice containing an RCT and qualitative studies.

Results and discussion
In the evaluation of complex interventions effect measuring by RCTs must be considered, and the programme theory (connecting intended activities, expected mechanisms, outcomes, and influential contextual conditions) should be described and evaluated. This is important to understand the effect and how, why and where the intervention is working or not.

Though both RCTs and qualitative studies of complex interventions have their strengths, there are several methodological challenges linked to choice of outcome measures, a connection between intervention and context, transferability of findings, assessment of fidelity, and difficulties identifying explanatory patterns in the data in regards to mechanisms, outcomes and contextual conditions.

Conclusion
According to the guidelines, evaluations of complex interventions should include RCTs, fidelity assessments and knowledge of how and why an intervention is working. However, there are several methodological challenges that need to be discussed by researchers and considered by intervention developers. Further, participating GPs could demand knowledge of these considerations before entering the intervention.

OP126 Influences of peer facilitation in general practice - a qualitative study

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Background
Practice facilitation is increasingly used to support guideline implementation and practice development in primary care and there is a need to explore how this implementation approach works in real-life settings. Practice facilitation is outreach visits to a practice by an outside person (health care professional) providing support in a process of change.

Objectives
The purpose was to explore facilitation from the recipients’ (i.e. general practice) perspective to gain a more detailed understanding of how peer facilitation influenced practices and how they valued the facilitation.

Methods
The facilitation intervention was conducted in general practice in the Capital Region of Denmark with the purpose of supporting the implementation of chronic disease management programmes. We observed 30 facilitation visits in 13 practice settings and interviewed the visited practices after their first and last visits. We then conducted a thematic analysis.

Results
Most respondents reported that facilitation visits had increased their knowledge and skills in relevant areas as well as their motivation and confidence to change. These positive influences were ascribed to a) the facilitation approach b) the credibility and know-how associated with the facilitators’ being peers c) the recurring visits providing protected time and invoking a sense of commitment. Despite these positive influences both the facilitation and the change process were also impeded by several challenges.

Conclusion
Practice facilitation is a multifaceted, interactive approach that may affect participants in several ways and it is important to attune the expectations of all the involved actors through elaborate discussions of needs, capabilities, wishes, and approaches. Future research should explore the complex links between the cognitive influences of practice facilitation and sustainable behavioural change.
OP127 Can comorbidity as measured by subjective health complaints and neuroticism predict outcome in frozen shoulder (shoulder capsulitis)?

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**Background**

Much has been focused on frozen shoulder and various treatment strategies, both conservative and surgical and their outcome. Little is discussed about the comorbidities that may affect the treatment outcome in the condition.

**Objectives**

To investigate whether age, gender or comorbidities at baseline can predict outcome in frozen shoulder as measured by Shoulder Pain and Disability Index (SPADI).

**Material and methods**

The 105 patients, divided in intervention group (69 patients) and control group (36 patients) recruited in the main randomised controlled trial, filled in three questionnaires; the Subjective Health Complaints (SHC) inventory, the Neuroticism (N) component of Eysenck Personality Questionnaire revised short form (EPQ-R) and SPADI at inclusion, at 4 weeks and 8 weeks. Baseline total SHC score and three subscales in SHC were controlled for; musculoskeletal (MSK), gastrointestinal (GIT) and pseudoneurology (PsN). Inclusion criteria and ethical considerations were met as in the main published study.

**Results**

There were no statistically significant differences in demography between the groups at baseline. PsN subscale in SHC had significant predictive power (p<0.001) in the control group at baseline. The intervention group exhibited statistical significant predictive power (p<0.001), but not the control group, in change in SPADI after 8 weeks (SPADI at baseline minus SPADI at 8 weeks). Being female had some predictive significance (p<0.005), but not age. Baseline SHC scores, MSK and GIT subscales were non-predictive at 8 weeks. Similarly, neuroticism was non-predictive at baseline and at 8 weeks in both intervention and control group.

**Conclusion**

Intervention and being female may predict outcome measured by the Shoulder pain and disability index in frozen shoulder. In broader picture psychometric parameters as measured by Subjective Health Complaints and Neuroticism (N) component of Eysenck Personality Questionnaire did not predict outcome in frozen shoulder measured by shoulder pain and disability index. One may conclude that in general psychometric parameters probably do not predict outcome in frozen shoulder.

**Key words:** Frozen shoulder, Shoulder capsulitis, Shoulder Pain and Disability Index, Subjective health complaints, Neuroticism.

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OP128 Prioritization in multimorbidity: general practitioners’ practices and views

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**Background:**

Current guidelines are made for single diseases. In patients with multimorbidity diseases may be competing for attention and conflicts between treatments for individual diseases occur. No directives are given for clinicians who have to sort out on their own how to prioritize in cases of several health problems.

**Objectives:**

What are the logics at play in priorities of GPs when patients have more health problems and not all of them can be solved at once? What is prioritized by GPs among more health problems?

**Material/Methods:**

The study is based on videorecordings of consultations in general practice (n=16) and interviews with GPs (n=6). GPs were selected to represent surgeries in both deprived and affluent areas. Consultations were selected for recording by GPs among patients suffering from two or more chronic illnesses. (Variation among patients was obtained as to whether they had difficulty in attaining treatment goals.)

**Results and Conclusion:**

The logics in priorities of GPs when having to choose between problems to solve were: 1) According to patient’s agenda, 2) What is currently bothersome, 3) Medical reasoning including interdependence of problems, 4) What the patient can handle. Examples of main goals guiding GPs prioritizing were parenting, everyday function and basic security and economy. The GPs planned problem solving in several steps as for example treating pain appropriately to improve patients’ sleep as the first step in successful rehabilitation. The findings of the study are relevant to the planning of interventions for multimorbidity. Interventions in multimorbidity trials emphasize the wishes of patients but do not address the role of medical doctor’s reasoning and planning for stepwise problem solving.
**OP129 Experiences with a brief functional evaluation for employees with musculoskeletal disorders**

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**Background:**
Musculoskeletal disorders (MSDs) are often associated with reduced function and ability to work. In the early phase of MSDs, initiatives at the workplace are considered important to prevent longterm disability, where both the employees and their supervisors have central roles. Few test batteries are developed to be a guide for how to manage musculoskeletal disorders and improve work functioning.

**Objectives:**
The aim of this study was to explore employees’ and supervisors’ experiences with a brief functional evaluation for employees with musculoskeletal disorders on short-term sick leave or working despite complaints.

**Material/methods:**
Health-care workers in Bergen municipality, Norway, underwent a functional evaluation in 2012 – 2013. Four weeks later, they returned a short questionnaire about its usefulness. Focus group interviews were also conducted: three with employees (11 participants) and five with their supervisors (26 participants). We analyzed questionnaire data using descriptive statistics, and the interviews using systematic text condensation.

**Results:**
In total, 144 employees (92% women) completed the questionnaire, and about 70% of the employees found the evaluation useful. Three main themes about its usefulness emerged from the qualitative data: clarification and raising awareness; the functional evaluation report as a tool for communication; and increased knowledge altered behavior.

**Conclusion:**
Both employees and supervisors found the brief functional evaluation tool useful in clarifying the employees’ functional level and in obtaining advice to improve employees’ health and work functioning. The report helped the employees to communicate their problems to supervisors and doctors, and was helpful to the supervisors when planning support and modified work tasks.

**OP130 Corticosteroid or placebo injection with deep transverse friction massage, Mills manipulation, stretching and eccentric exercise for acute lateral epicondylitis: a randomised, controlled trial**

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**Background**
Lateral epicondylitis of the elbow is a frequent condition with long-lasting symptoms. Corticosteroid injection is increasingly discouraged and there is little knowledge on the combined effect of corticosteroid injection and physiotherapy for acute conditions.

**Objectives**
We wanted to investigate the efficacy of physiotherapy alone and combined with corticosteroid injection for acute lateral epicondylitis.

**Material/Methods**
A randomized, controlled study with one-year follow-up was conducted in a general practice setting in Sarpsborg, Norway. We included 177 men and women aged 18 to 70 with clinically diagnosed lateral epicondylitis of recent onset (2 weeks to 3 months). They were randomly assigned to one of three treatments: physiotherapy with two corticosteroid injections, physiotherapy with two placebo injections or wait-and-see (control). Physiotherapy consisted of deep transverse friction massage, Mills manipulation, stretching, and eccentric exercises. We used double blind injection of corticosteroid and single blind assessments. The main outcome measure was treatment success defined as patients rating themselves completely recovered or much better on a six-point scale.

**Results**
157 patients (89%) completed the trial. Placebo injection with physiotherapy showed no significant difference compared to control or to corticosteroid injection with physiotherapy at any follow-up. Corticosteroid injection with physiotherapy had a 10.6 times larger odds for success at six weeks (odds ratio 10.60, p<0.01) compared to control (NNT=3, 99% CI 1.5 to 4.2). At 12 weeks there was no significant difference between these groups, but at 26 weeks the odds for success were 91% lower (OR 0.09, p<0.01) compared to control, showing a large negative effect.
At 52 weeks there was no significant difference. Both control and placebo injection with physiotherapy showed a gradual increase in success.

**Conclusions**

Acute lateral epicondylitis is a self-limiting condition where 3/4 of patients recover within 52 weeks. Physiotherapy with deep transverse friction massage, Mills manipulation, stretching, and eccentric exercises showed no clear benefit, and corticosteroid injection gave no added effect. Corticosteroid injections combined with physiotherapy might be considered for patients needing a quick improvement, but intermediate (12 to 26 weeks) worsening of symptoms makes the treatment difficult to recommend.


**OP131 Prognostic Factors and Treatment Effect Modifiers for Children and Adolescents with Musculoskeletal Pain: A Systematic Literature Review**

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**Background**

Musculoskeletal (MSK) pain is common among children and increases around the age of 10. Several studies highlight that MSK pain is also common across different populations and nationalities. Musculoskeletal pain can have a detrimental effect on the adolescents’ lives and cause them to withdraw from school, social life, and athletic activities. Recent prospective cohort studies have shown as much as 50% of adolescents with MSK pain will continue to be bothered by the pain even years later. Previously MSK pain was considered self-limiting, but recent evidence points to the contrary. This begs the question: who are the adolescents at high risk of developing long-standing MSK pain?

**Objective**

The objective of this study is to conduct a systematic review to identify prognostic factors and treatment effect modifiers for children and adolescents between 10 and 19 years of age with self-reported MSK pain.

**Methods**

The protocol for this systematic review was developed using the PRISMA-P 2015 statement and inspired by the Cochrane Central Register of Controlled Trials. The protocol was registered prospectively in the International Prospective Register of Systematic Reviews (PROSPERO, ID:CRD42016041378).

The review search was conducted on 21/06-2016 in Medline, Embase, Cinahl, Web of Science, Cochrane and SportDiscus. We included prospective cohort studies with a population of children and adolescents between 10 and 19 years of age. The participants were all required to report some form of self-reported MSK pain at study start. The final search string was applied in the above databases, resulting in 9,678 unique articles for screening. The process of study selection and screening was conducted independently by two reviewers. Studies kept after the primary inclusion was screened by full text and then selected for a final inclusion.

Data from the individual studies were extracted using a pre-defined data extraction form inspired by The Cochrane Collaboration. The collected data will include baseline patient characteristics that are: (i) associated with a poor outcome on follow up regardless of which treatment was provided (prognosis); or (ii) associated with a successful outcome to a specific treatment (treatment effect modifiers).

**Results**

Screening of the 9,678 articles is complete. We are currently reading through the full text of 148 articles to decide which are eligible for final inclusion. The full systematic review will be finished in time for presentation at the conference.

**Conclusion**

Our long-term goal is to develop an individual and unambiguous treatment strategy for children and adolescents with MSK pain. Knowing the prognostic factors for MSK pain can support the general practitioner in an effective, stratified, and individual treatment.

**OP133 Guilt without fault - a qualitative study on healthcare professionals’ feelings of guilt after a traumatic or adverse event**

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**Keywords:** Adverse events, Blame; Forgiveness; Guilt; Second victim

**Background:**
Healthcare professionals (HCPs) who experience an unanticipated adverse event are referred to as ‘second victims’, as opposed to ‘first victims’, who are the patients and their relatives. The second victim often feels responsible for the adverse outcome. In particular, feeling guilty over what happened appears to be central in the post-event trajectory, challenging not only the confidence and self-esteem of the HCPs, but also the ability to move on and put the event behind them. These findings contrast with current patient safety culture, which encourages blame-free attitudes and approaches errors as systemic. The system perspective on error promoted in the blame-free culture has been criticised from the viewpoint that physicians do not consider errors in a systemic context but direct the blame inwards. This may indicate that, although the current patient safety programs have promoted a more just and learning culture with less blame and shame, the personal feeling of guilt remains a burden for each HCP.

Aims: To demonstrate how theories of moral philosophy on forgiveness may contribute to the understanding of the complexities of guilt in the aftermath of an adverse event in healthcare.

Methods:
We interviewed 14 midwives and obstetricians who had been involved in traumatic childbirth, where the infant or the mother suffered severe and possibly fatal injuries related to the birth process. Philosophical insight has proven to be a useful resource in dealing with psychological issues of guilt, and we used Gamlund’s theory on forgiveness without blame as our theoretical framework for analysing three cases.

Results:
The empirical cases represent ‘guilt without fault’, where the HCPs are aware that they are not at fault but feel guilty nevertheless, and in such cases it is reasonable to suppose that they feel as if they are morally responsible for the event. If these HCPs feel as if they have done something wrong, then “there is simply no consolation for them to be found in the thought that what they did was not really their fault” (Gamlund, 2011, p. 124). Following this, it becomes vital that second victims experience acknowledgement of their guilty feelings, rather than futile attempts to take away their guilt. Failing to recognise and acknowledge guilt or guilty feelings precludes self-forgiveness, which could have a negative impact on the recovery of the second victim.

Conclusion:
Healthcare professionals may experience guilt without being at fault after a traumatic or adverse event. Acknowledgement of this guilt is a decisive factor in achieving self-forgiveness.

OP134 Is promotion of patient-professional relationships in primary care an option to affect hospitalisation?

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Background:
Ambulatory care affects hospitalisation for ambulatory care sensitive disorders. Psychiatric disorders add to multimorbidity and patient complexity. Socioeconomic factors affect health. Active listing and number of consultations could be regarded as measures of aspects of the relationship between patients and primary care. Our objective was to study hospitalisation as an outcome of primary care. We accounted for socioeconomic factors and added patient complexity (psychiatric disorders) in two different studies, and looked for difference within primary care.

Methods:
Cross-sectional studies of hospitalisation using zero-inflated negative binomial regression. Study population was Blekinge County in Sweden, in 2007. Main outcome was odds of hospitalisation and mean days hospitalised. Independent variables: listed actively or passively and consultations in primary care, adjusting for multimorbidity, age and sex. A (N=123 168) also including income, education and type of practice. B (N=151 731) also including psychiatric disorders.

Results:
A: Actively listed was in mean hospitalised for 0.94 (95%CI 0.90-0.99) days and passively listed for 1.32 (95%CI 1.24-1.40) days. For persons with 0-1 consultations mean number of days hospitalised was 1.21 (95%CI 1.13-1.29) and with 6-7 consultations 0.77 (95%CI 0.66-0.87) days. Mean number of days hospitalised for listed in type A practices was 1.22 (95%CI 1.16-1.28) and for listed in type B practices 0.98 (95%CI 0.94-1.01) days.

B: Actively listed without psychiatric disorder was in mean hospitalised for 0.77 (95%CI 0.73-0.81) days with 0-1 consultations, and 0.42 (95%CI 0.34-0.50) with 6-7 consultations. Passively listed without psychiatric disorder was in mean hospitalised for 0.72 (95%CI 0.67-0.77) days with 0-1 consultations, or 4.33 (95%CI 3.65-5.21) with 6-7 consultations. Passively listed with psychiatric disorder was in mean hospitalised for 0.72 (95%CI 0.67-0.77) days respectively.

Conclusions:
Active listing and more than one consultation in primary care are associated with fewer mean days hospitalised, with differences between practices. Psychiatric disorders are associated with longer mean hospitalisation and more reduction of hospitalisation with good relationship, than persons without.

Primary care with good relationship to patients could be an option to minimize hospitalisation.
OP135 Barriers and strategies for end-of-life care in nursing homes in Norway and the Netherlands
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Background
Working conditions in nursing homes may hamper functional teams in providing end-of-life care, especially the participation of nursing home doctors. Norwegian nursing home doctors are usually general practitioners working part time in nursing home, while Dutch nursing home doctors are specialists or trainees in elderly care medicine with nursing home as main working place.

Objectives
We aimed at assessing nursing home doctors’ perspectives on preconditions for end-of-life care in nursing homes in Norway and the Netherlands, and to map their suggestions on how medical end-of-life care can be improved.

Material/methods
All nursing home doctors in Norway (about 1200-1300) were invited by email, and 435 participated (response rate about 35%). Of all 1664 members of the Dutch association of elderly care physicians approached through the association’s electronic newsletter, 244 participated (response rate 15%). A cross-sectional study using an electronic questionnaire was conducted in 2015 focusing on nursing home doctors' perceptions of organizational, educational, financial, legal and personal prerequisites for quality end-of-life care. Differences between the countries were compared using chi-square test and t-test.

Results
Most respondents in both countries reported inadequate staffing, lack of skills among nursing personnel and heavy time commitment for doctors as important barriers; more pronounced among the Dutch respondents. About 30% of the respondents in both countries reported lack of interest in end-of-life care as an important barrier. Suggested improvement strategies were routines for involvement of patients’ families, pain- and symptom assessment protocols, end-of-life care guidelines, routines for advance care planning and education in end-of-life care for doctors and nursing staff.

Conclusion
Inadequate staffing, as well as lack of competence, time and interest, emerge as important barriers to quality end-of-life care according to Norwegian and Dutch nursing home doctors. Their perspectives were mostly similar, despite large educational and organizational differences. Key strategies for improving end-of-life care in their facilities comprise education and available tools and systems.

Keywords: Nursing home, end-of-life, nursing home doctor, Netherlands, Norway, survey

OP136 Cognitive behavioural therapy for chronic insomnia: a prospective study where treatment is offered in a Danish general practice
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Background:
Chronic insomnia increases the risk of developing depression, anxiety, hypertension, diabetes and cardiovascular disease. The strategy of choice for treatment of chronic insomnia is often a pharmacological approach (most commonly hypnotics). However, hypnotics are associated with serious adverse effects and long-term addiction. There is good evidence for the effect of cognitive behavioural therapy (CBT) for chronic insomnia with lasting effect and without adverse effects, why it is recommended as first line treatment. Nevertheless, its usage remains limited, partly because of limited numbers of qualified sleep therapists and a lack of government treatment programs. Consequently in our practice in Denmark (11,600 patients) we have started to offer our patients first line treatment with CBT by a qualified sleep therapist.

Objectives:
This study investigates the effect and sustainability of CBT for chronic insomnia in a general practice in Denmark.

Methods:
In a prospective study started on January 4th, 2017, patients with chronic insomnia are consecutively recruited. Inclusion criteria are severe mental illness and severe neurological disease. Subjects are divided into two groups. Group 1: Chronic insomnia patients. Group 2: Chronic insomnia patients receiving hypnotics. Inclusion criteria are chronic insomnia, with or without concurrent pharmacological treatment by hypnotics. Exclusion criteria are severe mental illness and severe neurological disease. Subjects are divided into two groups. In group 1, hypnotics will gradually be tapered. The effect of CBT will be monitored by sleep registration forms and by the Insomnia Severity Index and Epworth questionnaires. Furthermore, the consumption of hypnotics (in group 2) will be monitored. The sleep registration
forms, questionnaires and the consumption of hypnotics will be monitored before CBT, after tapering hypnotics (group 2), 3 and 6 month after the start of CBT.

Results and conclusion:
Upon submission of the abstract, data is too preliminary to warrant analysis. However, we will present sufficient data by June 2017, as recruitment of patients is currently on going at a high rate.

OP137 Trends in patient satisfaction, accessibility and continuity of care in Finnish primary health care - a 17-year follow-up questionnaire study

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Background
Accessibility and continuity of care are essential quality aspects of good general practice. There is a positive correlation between patient satisfaction, accessibility and continuity of care, and many medical treatment outcomes. In our previous studies we have explored decreasing trends in patient satisfaction, accessibility and continuity of care in the Finnish primary health care setting (1). At the moment Finland is facing one of the biggest social and health care reforms in its history.

Objectives
The aim here was to study the trends in patient satisfaction, accessibility and continuity of care from 1998 to 2015 and especially from 2011 to 2015.

Material/Methods
Eleven questionnaire surveys were conducted over a period of 17 years among patients attending within one week in the health centres in the Tampere University Hospital catchment area. A total of 166,460 patients responded. Patient satisfaction was assessed with the statement: „The service in the health centre was so good that I can recommend it to my family and friends”. Access to care was surveyed with the question: „How easy did you find it to call the health centre when making an appointment?” Patient-related continuity of care was assessed by asking patients: „When you visit the health centre, do you usually see the same doctor?”

Results
Patient satisfaction with care in Finnish health centres has increased 13 percentage units (53%-65%) from 2011 to 2015. At the same time there was also a 5 percentage unit’s increase (16%-21%) in ease of access as reported by patients. Instead of that respondents reported that the continuity of care has decreased 6 percentage units (49%-43%) during the study years.

Conclusions
Patient satisfaction with primary health care services has seemed to improve somewhat in Finland. Patient-reported ease of access has also improved slightly still being considerably low. Our concern is the continuous decreasing trend in patient-related continuity of care. So far, we have not seen in the recent social and health care reform plans any statement of evaluating or strengthening continuity of care in Finland.

Keywords
Accessibility, Continuity, Patient satisfaction, Primary health care, Questionnaire survey

Reference

OP138 Associations between degrees of task delegation in general practice and quality of care - a cross-sectional questionnaire- and register-based study

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Background
In recent years, the healthcare systems in the western world has undergone a structural development caused by demographic and political changes and the pattern of disease. The population is ageing, and chronic diseases and long term conditions are increasingly prevalent followed by a rise in healthcare demands. Consequently, various clinical functions formerly undertaken in the outpatient clinics are moved from the hospital sector to general practice urging general practitioners (GPs) to rethink the working structure without compromising the quality of care. It is a common assumption that moving more clinical tasks to the practice staff is an appropriate way to respond to the changing circumstances in general practice. However, moving medical tasks from the GP to supporting staff
within general practice raises some questions concerning the influence of this new way of organising the work on provision of healthcare.

Objectives
The aim of the study was to investigate associations between degrees of task delegation in the management of chronic diseases, using chronic obstructive pulmonary disease (COPD) as our case, and quality of care exemplified by the use of spirometry in general practice.

Material/Methods
The study was based on a combination of survey data and register data. An electronic questionnaire for all Danish GPs was developed, encompassing a part exploring task delegation regarding management of patients with COPD in general practice. On the basis of these data, we generated the explanatory variable which contained three degrees of task delegation, „minimal degree“, „medium degree“ and „maximal degree“. The outcome variable was whether or not COPD patients had a spirometry performed during the year 2013. This information was obtained from The Danish National Health Service Register regarding general practice, and in hospital settings, we got it from The Danish National Patient Register.

Multilevel mixed-effects logit models with patients nested within practices were applied to calculate odds ratios with 95% confidence intervals (CI).

Results
The analysis showed that the OR of having a spirometry performed was significantly higher in practices with „medium degree“ of task delegation than in those with „minimal degree“ (OR=1.27, CI=1.16; 1.38), and it was highest in practices with „maximal degree“ of task delegation, also compared to those with a „minimal degree“ (OR=1.33, CI=1.18; 1.49).

Conclusion
From the results, we can conclude that high degrees of tasks delegation might benefit the patients measured by patients having a spirometry performed within a year. According to this, GPs should not be reluctant to delegate tasks to their staff.

Keywords: Task delegation, quality of care, general practice, cross-sectional study

OP139 Anxiety and depression associated with urinary incontinence in women in two large population-based studies in Norway. Interpretation in a common model.

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Background:
Cross-sectional studies have brought anxiety and depression on the list of associated factors to urinary incontinence (UI). A few longitudinal studies have suggested a causal direction from depression to UI. There are possible biological, neurological and psychological explanation models for both directions of the association. The serotonergic pathways and the sympathetic nerve system are involved in both UI, anxiety and depression.

Objectives:
Study 1: to determine the association among middle-aged women in a large cross-sectional study (Felde G et al Int Urogynecol J 2012), Study 2: to investigate the association in a 10-year follow-up study (Felde G et al Neurourol Urodyn 2016). Here we sumerize and try to interpret our findings from both the studies.

Material/Methods:
In two Norwegian population-based questionnaire surveys (HUSK and HUNT), with similar sections about UI, depression and anxiety, we did cross-sectional analyses of 5321 women 40-44 years in study 1 and 10-year follow-up analyses of 16263 women 20 years and older in study 2. Logistic regression models were used in both studies to estimate adjusted odds ratios for the associations. UI was defined as any leakage with differentiations between three severity-levels and stress- and urgency components of UI. Anxiety and depression were measured by Hospital Anxiety and Depression Scale (HADS) and categorized as mild (8-11) and moderate/severe (≥11) score.

Results:
Study 1: Among women with UI, the adjusted OR for depression was 1.64 (95% CI, 1.32-2.04) and 1.59 (95% CI 1.36-1.86) for anxiety compared with women without UI, with highest odds ratios for mixed and severe UI. Study 2: For women with depression or anxiety at baseline we found an adjusted association with incidence of UI with OR 2.09 (1.55-2.83) and 1.65 (1.34-2.03) for severe depression and anxiety respectively, with a dose-dependent trend. There were highest ORs for incidence of urgency component of UI. UI at baseline was also associated with increased incidence of depression and anxiety, but only significant for incident mild anxiety- and depression-score with OR 1.42 (1.14-1.77) and 1.65 (1.32-2.07) for incident anxiety and depression respectively, both results for urgency component of UI at baseline.

Conclusion:
With cross-sectional analyses we found anxiety and depression to be associated to UI in women. Cause-effect-studies in the follow-up survey makes it likely that anxiety and depression are risk factors for incident UI. Especially among women with severe depression and anxiety it is important for GPs to be aware of the risk of UI to prevent additional symptom load and decrements in functional status and quality of life.

Key words: urinary incontinence, anxiety, depression, epidemiology, HADS, HUNT, HUSK, EPINCONT.
OP140 Variations in Physician Empathy among Danish General Practitioners

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Background:
Empathy is a key factor in a strong physician-patient relationship. High levels of empathy have been correlated with improved health outcomes across a variety of medical conditions and thus has potential for healthcare quality improvement.

Objectives:
Our objective is to measure and describe variation in physician empathy among Danish general practitioners (GP) and analyze the association between physician empathy and a variety of GP characteristics.

Materials/Methods:
The study involved a web-based survey that incorporated the well-established and validated Jefferson Scale of Empathy (JSE). The range of possible scores of the JSE is 20-140, where a higher score indicates a more empathic behavioral orientation. Further questions were included regarding GP demographics, practice characteristics, job satisfaction and workload. The survey was distributed to a random sample of 1196 Danish GPs among 6 strata based on population proportions of practice location (rural vs. suburban vs. urban) and practice type (solo vs. group practice), to ensure representativeness. Regression analysis was used to examine the relationship between the calculated physician empathy scores and physician characteristics.

Results:
A total of 464 respondents completed the questionnaire. Empathy scores were negatively skewed and ranged from 80-140 with an average score of 117.8. The median score was 118. Preliminary results showed that covariates explained 20.4% of the variation among empathy scores. Female GPs, GPs working in collaborative practices, and GPs who also performed research and consulting services had higher empathy scores. In addition, GPs with higher job satisfaction scored higher, particularly among those who viewed the physician-patient relationship and intellectual stimulation as important. There was no association between empathy scores and physician age, practice location, or amount of time spent with patients.

Conclusion:
The average JSE score, negative skewness of scores, and higher scores among females were consistent with other physician empathy studies in Denmark and in the United States. Physician behaviors that involve collaboration with patients, colleagues, and consulting teams tend to have higher empathy. The link between empathy and job satisfaction should be further explored in attempts to maximize both. Given the variability in empathy, there may be an opportunity to improve empathy in a subset of the GP population.

Keywords: Empathy, Physician-patient relationship

OP141 Sensing Potential Illness (or not) in Everyday Life

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Background:
Questions of how people respond to symptoms and initiate healthcare seeking are matters of great interest in relation to early diagnosis of serious diseases such as cancer. However, before we ask these questions, it is important to both challenge and contextualize what we mean by ‘symptom’ and care seeking. From the perspective of the health care provider, in many cases general practitioners, approached by the care-seeking individual, the care seeking process is most often retrospectively understood; from the presented health problem and backwards. However, within the ongoing everyday life, it is less clear how a symptom comes into being in the middle of the plethora of bodily sensations people experience. How do uncertain and ambiguous bodily sensations come to be experienced as something normal or abnormal that may legitimate care-seeking? Research suggests that we are witnessing an increasing disease sensitization in modern societies. Health promotion discourses and an epidemiologically grounded expansion of what counts as symptoms are said to be gradually colonizing everyday life experiences of the body.

Objectives:
In this context, how are bodily sensations ascribed meaning as symptoms of potential illness or not? This presentation will explore these processes in an effort to understand what happens when potential illness meets everyday life in the uncertain and overlapping space between ill and well.

Material/Methods:
The presentation is based on long-term ethnographic fieldwork in a Danish middle-class suburban neighbourhood,
including participant observation in everyday life activities, health-related activities, and repeated, semi-structured interviews. Interrelations between everyday life, healthcare seeking practices and the transformations between bodily sensations and potential symptoms were explored.

**Results:**
Applying the concept of potentiality to the process of sensorial meaning-making, the study identify four different potentialities of sensations that are continuously weighed against each other on a culturally contingent continuum between normal and abnormal when a bodily change is sensed in everyday life.

**Conclusion:**
By paying attention to such sensorial meaning-making processes in everyday life, the dynamics of what we term ‘symptom’ and the complexity of care seeking become visible and offer new explanations to the questions of how people sense and interpret symptoms and practise healthcare seeking in the context of everyday life.

**OP142 Impact of employment status and distance on mental health care utilization. A Danish nationwide follow-up study.**

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**Background:**
Equal access to health care treatment is a highly prioritized goal in most OECD countries. Common mental disorders as anxiety and depression affect one in six of the general population and amounts a great proportion of the consultations in general practice. It is known, that these disorders are strongly associated with socioeconomic position and unemployed have a higher morbidity rate too. Even so, the remote and most deprived municipality in Denmark used mental health services considerably less. Distance to more specialized mental health services could be an explanation for this or it could by because the GP cover their needs.

**Objective:**
To determine the impact of employment status and distance to provider on outpatient mental healthcare utilization among incident users of antidepressants.

**Method:**
A one year nationwide register-based cohort study covering 50,374 person-years; age 20 – 64.

**Results:**
Persons temporary not in job (TOJ) were more likely have contact psychiatrist (odds ratio (OR) 1.43; CI 1.35 – 1.53) as were students (OR 1.32; CI 1.19 – 1.46), compared to persons in job, whereas retired had less contact to psychiatrists (OR 0.86; CI 0.80 – 0.94). All not in job were less likely to consult a co-paid psychologists (TOJ OR: 0.43; CI 0.40 – 0.46 / retired OR 0.36; CI 0.32 – 0.40) or to have talk therapy by GP (TOJ OR: 0.71; CI 0.68 – 0.75 / retired OR 0.47; CI 0.43 – 0.50) compared to persons in job after adjusting for socio-demographics, comorbidity and car ownership. Furthermore, persons not in job who had contact to any of these therapists had fewer visits compared to those in job.

Retired persons were more likely to be admitted to mental hospital (OR 1.51; CI 1.30 – 1.74) and more frequently visit psychiatric emergency department (IRR 1.38; CI 1.22 – 1.57) and be admitted to mental hospital (IRR 1.24; CI 1.11 – 1.39), compared to persons in job.

When distance to services increased by 5 km the frequencies of visits to psychiatrist decreased by 6% in the group of retired and 3% in group in job. Likewise, frequencies of visits to psychologists decreased by 5% in the group retired and 3% in group in job. No interaction was found between employment status, distance and contacts to GP.

**Conclusion:**
Retired persons with mental health problems are poorly served by the outpatient services and seem rely on emergency care. Co-paid services by psychologists are used less than half as often by persons not in job. The GP does not compensate for less utilization of other services by persons not in job. Distance to provider aggravates the disparities in utilization between patients in job and the retired, slightly.

**Keywords:** employment status, distance, mental health service

**OP143 The impact of parents’ illness on children’s social life**

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Background
We know that children's social relationships are vital both for the experience of their childhood and for their current and future health profile. Children of parents with bad health are both more ill and lonelier compared to children with healthy parents. At the same time, numerous studies have shown that poor socioeconomic conditions during childhood increase the risk of developing diseases later in life; this is commonly referred to as the social gradient in health. This project investigates the role of a parent’s illness for children's social relationships in socio-economically disadvantaged families.

Objectives
How do children who grow up in socio-economically disadvantaged families with multimorbid parents engage with their social relationships and how is their investment in these relationships affected by the parents’ illness?

Material
Five socio-economically disadvantaged families with children between the age of 5 and 11 and parents living with multimorbidity were followed during four months of ethnographic fieldwork. The fieldwork consisted of weekly visits at the families’ home as well as observation in social situations such as the children’s leisure activities. In addition to semi-structured interviews with the parents and other family members and informal interviews with the children, two draw-and-talk exercises were done with the children. The task worded as follows: 1) Make a drawing of a happy situation in your family and 2) Make a drawing of a difficult situation in your family.

The children’s drawings and interviews will be analyzed as a single unit using thematic analysis.

Results
Data will be analyzed during spring 2017, and the presentation will comprise results from the analysis of the semi-structured interviews with parents and family members, the informal interviews with the children, as well as the drawings made by the children.

Preliminary analysis points at two themes. Having an ill parent restricts the way children engage in social relationships in their everyday life. The insecurity of not knowing the parent’s daily condition not only worries the child, but limits the child's eager to participate in social activities. E.g. to invite friends over. Illness does not only affect the individual, in this case the parent, but the whole family. This is important when we discuss e.g. illness burden, and should force us to always define whose burden we are talking about.

Keywords Multimorbidity, children, family, resources, social relationships

OP144 Patterns of health behaviour in a Danish sample of 30-49 year-old citizens: results from the ‘Check Your Health Preventive Program’

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Background:
Health behaviours such as habits of alcohol consumption, smoking, physical activity, and weight status are individual risk factors linked to development of chronic diseases. However, the joint effects of the individual behaviours might be even more important.

Objectives:
We aim to explore the health behaviour pattern in persons who attended a health check in a community-based prevention program. We furthermore aim to examine the association of the different health behaviour profiles with disease risk status.

Material/Methods:
From 2012 to 2013, 2,679 men and women attended the ‘Check Your Health Preventive Program’ (CHPP, N=26,000). We will use a latent-class-analysis (LCA) approach to identify subgroups with distinct health behaviour. The analysis will be based on four indicators of health behaviours; self-reported alcohol consumption, physical activity level, smoking status, and clinical measures of body mass index, BMI. Cut-points for creating the categorical levels of the indicators will be based on theory and data. Disease risk status will be categorized in 'low', 'increased' or 'high' risk of developing chronic disease such as diabetes, cardiovascular disease, and COPD. The association of membership of the different latent classes with disease risk status will be examined by multinominal logistic regression.

Results:
At the conference the distinct health behaviour patterns in a general population will be presented. Furthermore, the associations of different health behaviour profiles with chronic disease risk status will be presented.

Conclusion:
When planning future public health initiatives, the knowledge of potential population-specific subgroups with different health behaviour profiles will be beneficial for tailoring and targeting interventions to the right recipients, and thus, improve overall health behaviour.
OP145 New episodes for depression and stress reaction among employed people in Norway and subsequent sickness certification: A register based study among 4,031 Norwegian GPs

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Background
Norwegian GPs have to specify a medical diagnosis, based on the International Classification of Primary health Care (ICPC), on the invoice sent to the Health Economy Administration (HELFO) after each consultation. When employed persons consult their GP for a mental health problem, challenges related to work are often in focus. Many patients get a sickness certificate and remain on sick leave over time. Depression and stress reactions are the most frequent mental reasons for sick leave, but it varies between the Nordic countries.

Objectives
To investigate the incidence of depression and stress reactions among employed patients in Norwegian general practice, sickness certification and sick-leave.

Material/Methods
We used the Norwegian national GP claims register (KUHR), and identified all employed persons who had not consulted their GP during the last 3 months, consulting a regular GP with an episode of depression (P03, P76, P78) or acute stress reaction (P02), in 2007, calculating incidence rates. We also identified those consultations where a sickness certification was issued, persons staying on sick leave 16 days and 12 weeks later in the National sickness absence register. We obtained patient- and GP-related variables from Statistics Norway and the GP register and used these as predictors for the outcomes (sickness certification, sick leave > 16 days and > 12 weeks, by means of logistic regression analysis.

Results
During one year 17,629 employed women (7.9/1000) and 11,688 employed men (5.2/1000) consulted their GPs for a new episode of depression, whereas 9,304 women (4.2/1000) and 5,222 men (2.3/1000) consulted with a new episode of acute stress reaction. In depression 43% were sickness certified initially and 11% stayed on sick-leave >16 days, whereas 75% were sickness certified and 10% stayed on sick leave> 16 days in stress related cases. Male gender significantly decreased the risk for short term sick leave in depression and long-term absence in stress-related cases, when adjusted for all other variables. Higher age decreased initial sickness certification but increased long-term absence. Higher education predicted shorter sick leave in depression but not in stress reactions. In stress-related cases patient having a specialist GP or a male GP were less on long-term sick leave. Patients on long lists had also shorter sick leaves both in depression and stress related cases

Conclusions:
Employed people in Norway consulting their GP for mental health problems are diagnosed with depression much more often than with stress reactions. However people consulting their GP with stress-reactions more often need a sick leave, but very often quite short. Differences between GPs should be further assessed.

OP146 Physical Activity and postpartum depression

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Background:
few studies are looking at physical activity and postpartum depression.

Objectives:
Our hypothesis was if physical activity during pregnancy is associated with postpartum depression.

Material/Method:
Population-based, prospective cohort of 472 pregnant women (59% ethnic minorities) attending primary antenatal care from early pregnancy to postpartum in Oslo between 2008 and 2010. Questionnaires covering demographics and health problems were collected through interviews. Postpartum depression was defined as a sum score ≥ 10 by the Edinburgh Postnatal Depression Scale (EPDS) at 14 weeks postpartum. Physical activity was recorded with Sense Wear™ Pro3 Armband (SWA) in gestational week 28 and defined as moderate-to-vigorous intensity physical activity (MVPA) accumulated in bouts ≥10 minutes. Women wearing armband for at least two days were included.

Results:
Preliminary results show that those who are not active at all have significantly higher risk (OR: 4.7, p=0.019) for depression compared with those who are active >150 min a week. Other risk factors are ethnic minority background,
adverse life events and depressed in index pregnancy.

Conclusion:
Our main finding is that women who are not physically active during pregnancy are at higher risk of getting postpartum depression compared to women who are active >150 min a week. Ethnic minority women are more often 0/min active compared to women from Western Europe.

OP147 Does the presence of dementia as well as comorbidities increase the risk of traffic accidents and falls among home dwelling people?

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Background:
In the aging population the prevalence of dementia and comorbidity increases. Identifying the accident risk among this population can help general practitioners (GPs), home- and health care professionals provide practical advice to the patients for safer living and movements, in order to maximize patients’ mobility and minimize accident. However, it remains unclear whether dementia as well as comorbidities associated with dementia increases the risk of accidents among older people.

Objective:
To investigate the effect of dementia as well as comorbidities on the risk of road traffic-related accidents and accidents from falls among home dwelling older people in Denmark.

Methods:
This study comprises two population-based case-control studies: one for road traffic related accidents and one for falls. From all persons aged 65 or older registered in the Danish Civil Registration System at the 1st of January 1st, 2008, cases were identified as those with an accident (either road traffic-related or fall) in 2009-2014. For each case, six age-, sex- and municipality-matched controls were selected. Persons were excluded if they: (1) had an accident from falls in 2008, (2) lived in a nursing home at the time of the accident. The accidents and falls were extracted from police- and hospital-registers. Dementia and eight common chronic diseases (T2D, COPD, IHD, depression, hypertension, stroke, atrial fibrillation, and asthma) were identified from the Danish National Patient Register and the use of specific prescription medicines from the Danish National Prescription Registry. Conditional logistic regression models adjusted for marital status and education were applied for the analysis.

Results:
The underlying population base has 853,228 individuals. Results will be presented at the conference.

Conclusion:
We hypothesize an increased risk of accidents among people with dementia and comorbidity, and a dose-response relationship between the number of comorbidities associated with dementia and accidents.

OP148 Sick-listed patients experiences with independent medical evaluation: a qualitative interview study

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Background:
Independent medical evaluation (IME) involves an independent physician consulting a patient. It is traditionally requested by insurance companies, attorneys, case managers or employers who want to establish „estimated” physical capacities, degree of disability, and/or the reason for work disability. Internationally it is used when there is uncertainty around the functional status and/or the employee’s rehabilitation potential.

In Norway it has been discussed whether the relationship between a patient on sick leave and his/her general practitioner (GP) is too close, as this may hinder the GP’s objective evaluation of need for sick leave. Hence, a large ongoing randomized controlled trial is assessing the effect of IME on return to work in a Norwegian county. Patients sick-listed for 24 weeks are either allocated to usual follow-up by their GP (control group) or usual care and an IME-consultation (intervention group). An IME-doctor performs the IME-consultation as a second opinion on the patient’s fitness for work or need for continued sick leave, full or graded. A qualitative evaluation is conducted to gain insight into stakeholder’s experiences with the IME, hereunder patients, their GPs and the IME-doctors

Objectives:
In this study we have explored patients’ experiences with attending an IME-consultation.

Methods:
Data were drawn from nine individual semi-structured telephone-interviews. Our convenience sample of participants included six women and three men aged 35-59 years. We applied Systematic Text Condensation (STC) for analysis, a method for thematic cross-case analysis.

**Results:**
We will present preliminary results from this study at the 20th Nordic Congress of General Practice.

**Conclusion:**
Conclusion based on the preliminary results will be presented.

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**OP149 Self-reported depression in patients visiting their general practitioner**

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**Background.**
Depressive symptoms are widespread in the general population and commonly managed in general practice. There are few studies on self-reported depression among patients visiting their GP.

**Objectives.**
To explore the prevalence and management of self-reported depression among adult patients in general practice, as well as associations with sex, age and education level.

**Methods.**
Questionnaire data were collected by 59 medical students while deployed in different general practices during their last year of school in 2016. A total of 1023 (response rate 87%) consecutive and unselected patients visiting their GPs answered questions regarding depressive symptoms, various treatment options, and contentment with their GP.

**Results.**
In total, 321/1023 (31.4%) patients reported to have discussed with their GP that they had suffered from depression. Current or previous depressive symptoms (depressive mood and/or anhedonia) were reported by 54.5% and 69.5%, respectively. The 321 patients reported having received the following treatment options; referral to psychologist/psychiatrist (54.5%), medications (49.8%), psychotherapy with GP (48.7%), sickness certification (41.7%) and referral to psychomotor physiotherapist (9.6%). Younger age was associated with referral to psychologist/psychiatrist, and female sex with referral to psychomotor physiotherapist, with no significant age or sex differences for other treatment modalities. Drug treatment was related to low educational level, and sickness certification with high educational level. In total, 74.0% of patients agreed that they had received good help from their GP.

**Conclusions.**
Depression was highly prevalent among patients visiting their GP. Most patients were satisfied with GPs’ management of their depression. Differences in treatment regarding to age, sex and education deserve more attention.

**Key words.** Depression, general practice, management, referral, patient satisfaction

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**OP150 Collaborative care for anxiety and depression - the role of care managers**

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**Background:**
Anxiety and depression form a major burden for patients and health systems. In order to improve the treatment of these patient groups collaborative care models have been designed. These models are based on cross-sectorial and inter-professional collaboration between psychiatry and general practice. In collaborative care psychiatric nurses (care managers) treat patients with anxiety or depression in general practice. A Danish model of Collaborative care is currently being tested and followed by implementation research.

**Objectives:**
The aim of this study is to explore the care managers’ experiences of their work and the conditions for and challenges when fulfilling their role as care managers.

**Material/Methods:**
Qualitative interviews were carried out with care managers and observations and recording of psychiatric supervision of care managers was done. Thematic analysis was performed alongside an analysis based on Normalisation Process Theory.

**Results:**
The core task for care managers (CMs) was to treat patients with anxiety and depression and to have regular
meetings with the general practitioner (GP). However, the CMs had to handle several practical challenges for example in regards to finding a suitable location and arranging communication procedures before they could arrive at the core task. In addition, the CMs had to be quite flexible in order to deal with the clinical and organizational reality of general practice. First the CMs had to adapt their work routines to the various needs and circumstances of the different GP practices they encountered. Second they had to adapt to the patient population in general practice which differed from a hospital patient population. Despite having the same degree of depression, the CMs experienced that patients in general practice had a higher level of functioning, and the treatment process had to be adjusted to meet the patients’ needs while still adhering to the requirements of the model.

Conclusion:
A collaborative care model designed in psychiatry may face certain challenges during implementation in general practice. Preparing the ground for implementation of collaborative care models requires negotiations with representatives from general practice to address practical issues such as the location of care managers and the routine interaction and communication with care managers. Future research should include a preparatory phase with involvement of all stakeholders and clear definitions of overall leadership and responsibility.

OP151 Prescription of proton pump inhibitors in general practice. Results from audit of treatment patterns among Danish general practitioners

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Background
More than 10% of the Danish population redeemed a prescription for a proton pump inhibitor in 2015. The vast majority was prescribed in general practice. Current knowledge of the prevalence of conditions that justify such treatment indicates much lower numbers of cases, which means that overtreatment may be the case. Recent knowledge of the risk of side effects and rebound acid hypersecretion following discontinuation further supports that the high number of patients treated with proton pump inhibitors may be an important health problem.

Objectives
To investigate the prescription pattern of Danish GPs with regard to proton pump inhibitors. Furthermore, to identify the possibility of improvement in treatments.

Material/Methods
All GPs in the Region of Southern Denmark and their clinic staff were invited to participate in a four-week audit. According to the Audit Project Odense (APO) method, GPs recorded information on all patients who attended the clinic and were users of proton pump inhibitors. Staff members recorded all patients who called, e-mailed or showed up for prescription renewal for proton pump inhibitors. Participation was voluntary, unpaid and free of charge. It included a one-day course where the results of the audit were presented.

Results
A total of 28 practices participated. Fifty GPs (six percent of the invited GPs) included 1,091 patients, and 46 members of staff included 717 patients. Proton pump inhibitors had been taken for more than two years in 58% of the GP-reported cases, and 64% of the patients took the drug on a daily basis. The most frequent causes of treatment were dyspepsia (35%), hiatal hernia found by gastroscopy (13%), and treatment with non-steroid anti-inflammatory drugs (NSAIDS) (23%). Symptoms were the only given cause of treatment in 21% of the patients. In 39% of the patients who had been treated for more than two years, a gastroscopy had never been conducted. A test for Helicobacter Pylori had been conducted in 8% of all patients the year before registration. In 65% of the patients who started treatment within one month, the treatment was planned for a limited duration. In 14% of the patients who had been treated for more than two years, the treatment was either reduced or stopped on the day of registration.

Conclusion
Long-term treatment without clear indications was registered in quite some patients, and only one of four patients had consulted the GP within the last year about PPI prescription.

Key words: Proton pump inhibitor, dyspepsia, gastroesophageal reflux, gastroscopy and Helicobacter Pylori.

OP152 WHAT DO PATIENTS WANT FROM THEIR FUTURE DOCTOR?

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OP153 CPD planning, can trust in professional integrity and administrative accountability be combined?

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Background
Everyone agrees that comprehensive continuing professional development (CPD) is essential for developing and maintaining high professional standards in general practice. However, CPD is organized differently in different countries and we still have to explore which approach would be best from the patients’ perspective.

Denmark has introduced systematic CPD in order to obtain better administrative accountability. The first step in this process was identification of common learning needs.

Objective
To explore whether general practitioners’ (GPs) self-experienced learning needs can be combined with the learning needs experienced from a societal perspective and still make sense for GPs.

Methods
We performed multidimensional GP learning needs analysis in a DELPHI set up. We asked twenty practice-based small learning groups and a group appointed by the Danish public health service to identify learning needs. The Danish family medicine curriculum was used as reference. The ratings were analyzed in STATA. We then asked a group of GP researchers, hospital consultants, a group of GPs with interests in narrative, person-centered medicine and a group of GP educators, and administrative staff, to triangulate the initial findings. We used grounded theory to analyze qualitative data. The data from step two was negotiated with the participants in a collaborative action research set up.

Results
The multidimensional approach identified educational themes, which made sense both for the GPs and the political administrative system. These were themes such as the diagnostic challenge, multi-morbidity, the fragile older patient, psychiatry and others.

There were however also disagreements. The political system requested education in collaboration and treatment of classic diseases such diabetes, heart, lung and kidney diseases, while the doctors requested less diagnose oriented but more patient oriented topic and complex medical conditions. The agreed themes therefore would only make sense if part of a larger, comprehensive CPD program, which also enabled CPD activities based on GPs’ individual needs analyses.
Conclusion
A comprehensive CPD programme should primarily be based on individual need analysis and trust in professional integrity but by adding a consensus based curriculum to the CPD programme, it seems possible to bridge professional integrity and administrative accountability in CPD planning. Adding such a curriculum should maintain a focus on patient centered care.

OP154 Clinical decision making game
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BACKGROUND
Skills and knowledge attained in undergraduate education need to be transformed into clinical skills during early postgraduate phase. Clinical decision making has been demonstrated to be a difficult task for trainees. Tactic decision making games have been successfully used in teaching decision making, mainly outside medicine.

AIMS
Our aim was to develop a „low-tech“ clinical decision making game for trainees in the primary health care setting, and to pilot and evaluate the feasibility of the game.

METHODS
After three brainstorming sessions of the developers, the idea of the game was generated: participants listen to the same audiotaped phone call but each have a different authentic written scenario based on which the decision has to be made. Decisions are articulated and followed by self-assessment and peer assessment concerning the decision making, not clinical aspects. Time limit for each step is 60 sec. The game has four rounds (i.e. four different phone calls).

RESULTS
In the three pilot games, participants considered the limited time and the evaluation most challenging. However, participants gained new perspectives on reasoning. The trainers indicated that familiar group evokes a safe and confidential atmosphere. The observers’ notion was that the game requires cognitive and meta-cognitive skills related to self-critique and self-regulation. It favors verbally talented players. The piloting pointed out the demands and the pitfalls of the audiotaped calls, other material, timing as well as group dynamics.

CONCLUSIONS
The decision making game proved to be acceptable and applicable. It’s essential to develop a game iteratively with users.

OP155 Coproduction as a concept to describe the unique features of general practice
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Background
According to The World Organization of Family Doctors (WONCA) person-centred care is a core competence of general practitioners (GPs). Person-centred care is promoted by multiple consultations over time that enhances personal relationships between patients and GPs. However, from a general practice perspective, there is a lack of resources to meet the needs of more complex patients and the increased amount of tasks transferred to general practice. These challenges and the unique features of general practice are, according to a WONCA Europe declaration from 2016, not acknowledged among stakeholders. Coproduction is a concept describing the importance of patient-doctor relationships that enhances person-centred care, and the possible incremental effect on health behaviour and quality of life. Moreover, coproduction emphasizes the importance of effective exchange of information in between patients and GPs.

Objectives
To investigate implications of the concept of coproduction of healthcare and how the concept support the unique features of general practice.

Material
Center for Quality, University of Southern Denmark and Region of Southern Denmark arranged a dialogue seminar titled „Coproduction of healthcare service“. We invited 60 healthcare professionals and stakeholders with interest in quality improvement in healthcare: clinicians, GPs, researchers, leaders, and policymakers.
Results
The dialogue seminar had 23 participants. They identified three categories that are relevant to general practice: Are we doing it the right way? In our post-modern period, new problems arise such as patients with complex needs and the transfer of hospital tasks to general practice. These problems require new concepts and solutions.

Concepts and perspectives. Coproduction invites patients to the table with healthcare professionals. Patients should have the possibility to contribute with information in advance of consultations, so the consultation itself may be used for questions that matter to them. How do we create a change? Healthcare professionals should exchange experiences with colleagues and patients. If we want to coproduce healthcare, there should be less control and we need to rethink the allocation of resources.

Conclusion
The concept of coproduction addresses challenges in general practice such as complex patients and limited resources because coproduction emphasizes the importance of patient-doctor relationships and person-centred care. Finally, coproduction may prove useful in investigating and describing the unique features of general practice, thereby increasing stakeholders' awareness of the importance of these features. We will encourage research that applies the concept of coproduction to general practice.

OP156 Barriers and spurs of specialisation in family medicine/general practice: a mixed method study at the University of Helsinki

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Background
Family medicine/general practice (FM/GP) is the foundation for a well-functioning healthcare system. FM/GP was the largest specialty at the University of Helsinki with 421 trainees at the end of 2015. During recent years, 20 to 30 trainees have graduated from the program annually. However, the amount does not meet the demands of the healthcare system. Furthermore, newly-qualified specialists tend to take up working positions elsewhere in the service system than in primary health care.

Objective
The aim of our study is to investigate how the post-graduate education program is carried out and how it meets the demands of the developing service system. In addition, we aim to find out what factors made the program run smoothly and what slowed it down. The physicians' placement in the service system after their graduation will also be a subject of interest in this study.

Material and methods
This cross-sectional study is conducted among the graduated specialists (graduated between 2012-2016, n=92) in FM/GP at the University of Helsinki. Firstly, focus group interviews will be held, and subsequently, an electronic questionnaire will be created. The study will be carried out during spring 2017 and preliminary results presented at the conference. The results of this study will be used on improving the postgraduate education program and they may possibly benefit other specialties as well.

OP157 Patient expectations in consultations with RTI's in a GP setting in Norway

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Background:
Antibiotic resistance is a growing problem worldwide. Research shows a clear connection between a high consumption of antibiotics and the development of resistance. There are great variations between the European countries when it comes to consumption. In spite of several interventions, the variations seem to be constant. Cultural differences are often cited as an explanation for these variations.

In Norway 60 % of all antibiotics prescribed in Primary Care are prescribed for Respiratory Tract Infections (RTI's). Many of these are unnecessary because a majority of RTI's are caused by a virus and cannot be treated with antibiotics. Several studies show that the labeling of illness is an important factor when it comes to seeing the GP and asking for antibiotics. In a study by Deschepper et al on Cross-cultural differences in lay attitudes and utilization of antibiotics in a Belgian and Dutch city, Dutch participants labelled most URTI episodes as a „common cold” or „flu”. The Flemish participants however, labelled most of their URTI episodes as „bronchitis” and used more antibiotics.
Objectives:
To identify cultural determinants for patient preconceptions and expectations of respiratory tract infections and antibiotic treatment and health seeking behaviour.

Material/Method
Semi structured in-depth interviews with adult patients in Norway, France and Poland seeing their GP with a respiratory tract infection. Patients were interviewed before and after consultation and interviews were made until saturation of data, resulting in 30 interviews in each country. In the Norwegian material the age of the patients varied between 19-74 and ~ 2/3 were women. Thematic qualitative analysis were made using Nvivo

Results
The material is currently being analyzed, but preliminary findings show that having a cough is a driving force for seeing a GP in Norway. The greatest fear of the patient is that of pneumonia or bronchitis. The patients either see their GP after a day or two with a cough, or they wait for three weeks or more and are then sent to their GP by a concerned family member or others. A majority of the patients do not want antibiotics, but the reassurance of the GP that there is nothing wrong. A great part of this reassurement is linked to taking a CRP or other tests and the conversation with the GP. Further findings will be presented.

Conclusion
By identifying certain factors for antibiotic use and health seeking behavior linked to RTI’s, we will be able to tailor make interventions and information campaigns towards the public, and by doing so hopefully reduce the use of antibiotics and the development of resistance.

OP158 Gastroenteritis in primary care in Norway 2006-2015: encounters in general practice and out-of-hours services

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Background:
The main symptom of gastroenteritis is acute diarrhea (passing of > 3 loose stools in 24 hours lasting for more than 24 hours). In the Nordic countries, as in other high-income countries, gastroenteritis is rarely lethal but causes considerable socio-economic costs. Gastroenteritis is also of public health concern as the condition often appears in the form of outbreaks. In most cases gastroenteritis is a self-limiting condition that can be managed at home without specific treatment. Little is known about the number of primary care consultations that are due to gastroenteritis, and whether patients with gastroenteritis consult general practice (GP) or out-of-hours (OOH) services. Increased knowledge on this patient group’s use of primary care services is useful for planning health services and infectious disease control measures.

Objectives:
To investigate the impact of gastroenteritis on GP and OOH services, and explore potential differences related to patient characteristics.

Material/Methods:
Registry based study of all patients seeking GP or OOH services in Norway in the period 2006-2015. Patients are identified from electronic reimbursement claims (KUHR-database). The KUHR-database contains information on ICPC diagnoses and date for each claim/consultation, in addition to information on the patients’ age and gender. The ICPC diagnoses most relevant for this study are „D70 Gastrointestinal infection” and „D73 Gastroenteritis presumed infection”.

Results:
There were a total of 140199585 reimbursement claims from GP and OOH services consultations in Norway during the 10-year period. Preliminary analyses show that 0.38 % (530054) contained the diagnosis D73, and 0.10 % (144406) the diagnosis D70. The proportion of D73 consultations decreased from 0.40 % (48932) in 2006 to 0.34 % (52309) in 2015, while the proportion of D70 has been stable during the period. The gender distribution of the complete dataset (58 % female patients) differs from the distribution of D70 and D73 consultations with respectively 53 % and 52 % female patients. In the total dataset, 9 % of all consultations were from OOH services, whereas for D70 and D73, 17 % and 21 % of the consultations were at OOH services. Further results will be presented at the conference.

Conclusion:
During the last ten years, a decreasing proportion of patient consultations given the diagnosis D73, while the proportion given D70 have been stable. Approximately 20 % of these consultations were from OOH services. Both D70 and D73 consultations seem to be equally distributed among men and women.

Keywords: epidemiology; gastroenteritis; general practice; health services research; primary health care.

OP159 Urinary tract infections caused by ESBL-producing E.coli are increasing among adult female patients in the primary health care of Uppsala County
Background:
Lower uncomplicated urinary tract infections (UTIs) in women are a common cause of consultation in primary care. Antibiotics are usually recommended, but there is always a risk of selection of resistant bacteria during treatment. ESBL-producing members of the Enterobacteriaceae family have during the last years emerged as a serious threat to public health.

Methods:
Every year, from 2008 to 2015, at least 100 E. coli isolates were collected during early spring from the urine of women aged 15 years or older with suspected UTI. The bacteria were quantified and identified to the species level with conventional methods and MALDI-TOF. The antibiotic susceptibility was tested according to the recommendations of EUCAST. Patients with multiple underlying conditions, a longer stay in a nursing home, hospitalization during the last six months, and carriage of urine catheter were excluded from the study. Data were handled anonymously.

Results:
A total of 1,633 urine samples were collected during the study period from women with a median age of 54 years (15-97 years). The urine samples yielded 1,066 positive urine cultures (65%), and the percentage of positive cultures increased from 63% 2008 to 73% 2015. E.coli was the most common bacterium isolated. It grew in 879 (82%) of the cultures. The total number of ESBL-producing E.coli was 20. In 2008, there was one patient (0.7%) with ESBL-producing E.coli. Seven years later the figure had increased to six patients (6%). The antibiotic resistance rates among E.coli isolates increased for ampicillin (29.5% to 33.0%), cephadroxil (1.3% to 6.6%), trimethoprim (18.6% to 20.8%), and mecillinam (1.3% to 2.8%). For the quinolones there was a decrease from 7.7% to 5.7%.

Conclusion:
Few studies have been published in which urine samples have been collected and cultured annually for several years from otherwise healthy women. The results of the study show that it is usually postmenopausal women who suffer from UTIs, and that growth of E.coli is the most common finding. Furthermore, the antibiotic resistance among E.coli isolates has grown slowly but surely. Most worrying is the number of UTIs caused by ESBL-producing E.coli, since the carriage rate is probably much higher. Sweden is usually a country with low isolation frequencies of multiresistant bacteria, but to stop this development will be a real challenge, if at all possible.

OP160 Prescriptions of antibiotics in out-of-hours primary care in Reykjavik area 2014

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Background:
Antibiotic resistance is a growing problem worldwide. Important causal factor for this development is considered to be too much prescription of antibiotics and unnecessary prescription of broad spectrum antibiotics. In Iceland, most antibiotic prescriptions goes through outpatient clinics (88%), and GP’s in Iceland prescribe 58% of all antibiotics prescribed in the country. About 2/3 of the population of Iceland lives in Reykjavik area. Out-of-hours service (OOH) for primary care in Reykjavik area is centralized in one clinic, open in evenings, weekends and on holidays. Antibiotic prescriptions in OOH primary care in Reykjavik area has not been studied before.

Objectives:
The aim of the study was to gather retrospectively information about all oral antibiotic prescriptions in OOH primary care service in Reykjavik area over one year period. Furthermore, to study the choice of drugs for different, common diagnoses, age and sex, and whether guidelines for treatment were followed.

Material and methods:
Participants of this study were those who attended the OOH primary care service in Reykjavik area from January 1st 2014 to December 31st 2014, and were prescribed an oral antibacterial drug. The ATC coding (Anatomic Therapeutic Chemical Classification System) and the disease diagnosis by the ICD-10 code (World Health Organisation International Classification of Diseases, version 2010) were used. Authorization for this study was given by The National Bioethics Committee in Iceland, in December 2015.

Results:
There were 75582 contacts with the OOH primary care and of those, 25059 contacts resultet in prescription of an oral antibiotic, 33% of all contacts. Mean age was 32.4 year (0-99). Men were 41%, women 58%. The most common antibiotic prescribed was amoxicillin combined with clavulanic acid, in total of 5695 or 22% of all antibiotic prescriptions. It was most often prescribed for acute otitis media or in 50% of all those cases, secondly for pneumonia, in 40% of all those cases. The second most prescribed antibiotic was amoxicillin, 4608 prescriptions, 18% of all. Most often it was prescribed for sinusitis, 1673 times or 47% of those cases. Secondly for bronchitis, 932 times or 29% of those cases.

Conclusion:
Antibiotics are often prescribed in OOH primary care and a substantial number of the patients diagnosed in OOH primary care with acute otitis media or pneumonia are prescribed broad spectrum antibiotic even if clinical guidelines
and recommendations do not support that choice.

OP161 Primary Immunodeficiencies - how to recognise and test for these diseases. Basic and useful information for frontline health care providers in General Practice.

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Primary Immunodeficiencies are a heterogen group of disorders with different immunological presentations most often seen with increased susceptibility to infections and with autoimmune reactions. Overall they are seen in about 1:1200 people, which means that most GPs will have 1-2 patients in their practice. These individuals have a deficient or a dysregulative immunesystem in common. Symptoms can vary over time and from person to person. The diagnosis is often initially based on symptoms and simple tests. More advanced genetic testing is increasingly used revealing the underlying genetic cause and are helpful in explanation of the immunobiological defects of these diseases. Newborn screening for the most severe Primary Immunodeficiencies is now implemented in several Countries in Europe and US. This overview will provide a visible a very useful and immediately usable information on how to recognise and find patients with possible PID. This can be brought home in General Practice and easily be implemented. As GPs working as frontline health care providers, we have to be able to recognise these disorders. These patients are often undiagnosed for several years receiving different symptomatic treatments but not specific treatment for the underlying cause of their disease. It makes a remarkable difference for these patients to be diagnosed and treated early. If these patients are diagnosed in due time appropriate treatment can often prevent irreversible complications and organ damage and the patients may achieve a next to normale life.

OP162 POINT-OF-CARE ULTRASOUND IN GENERAL PRACTICE: A SYSTEMATIC REVIEW.

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Background:
The use of point-of-care ultrasound (POC-US) is increasing in general practice. POC-US may support the physical examination of patients, improve the diagnostic process and guide procedures, e.g. injections or blood samples. This could potentially reduce costs by decreasing the need for more advanced examinations in the secondary health care sector. However, as POC-US is a user-dependent technology, it entails a risk of misinterpretations. An increased access to imaging may lead to overdiagnosis or incidental findings and thereby elicit emotional distress in patients. This may stimulate further imaging and overtreatment.

Objective:
The primary objective of this study is to systematically review and synthesize the published literature regarding the use of POC-US in general practice and the training of GPs using POC-US.

Method:
We set out for an assessment of available research literature to extract information about which conditions POC-US was used for, the GPs training, quality assessment, frequency, time consummation, possible harms (such as misdiagnosis, overdagnosis and incidental findings), patient satisfaction, and financial costs associated with POC-US use.

This study was registered prospectively in PROSPERO. We searched the following databases: MEDLINE via Pubmed, EMBASE via OVID, Cinahl via Ebsco, Web of Science, and Cochrane Register of Controlled Trials using the keywords “ultrasonography” and “general practice” in combination and replaced with thesaurus terms.

We included clinical trials, observational studies, audits, and case series containing original data. Included were papers describing the use or training in use of POC-US among GPs or GPs in training and POC-US performed by a GP or a GP in training with an image for the clinician to view. Excluded were papers regarding referral for ultrasound examination, papers describing ultrasound as thermal therapeutic ultrasound, and papers not published in Danish, English, Norwegian or Swedish.

Two reviewers independently extracted data and assessed papers using the Downs and Blacks checklist. Since the included studies used a range of different outcomes to describe the use of POC-US, we aimed to describe the results narratively.

Results:
The search identified 9989 citations which yielded 6962 unique papers after removal of duplicates. The screening by title and abstract is in process and the results will be presented at the conference.
Conclusion:
As the use of POC-US is increasing, we hope this study may guide the GPs in appropriate use of POC-US.

OP163 What is appropriate and inappropriate use of ultrasound in general practice? - A qualitative interview study among Danish general practitioners.

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Background:
Ultrasound can be used by clinicians at the bedside as Point-of-care ultrasound (POC-US) to support the physical examination of patients or to guide procedures, e.g. injections or blood samples. In Denmark POC-US is still predominantly used in the secondary sector, but the use in general practice is increasing. POC-US can potentially give the general practitioner (GP) a tool to improve diagnosis, precision in referrals, and strengthen patient pathways leading to optimal use of resources in the healthcare system. It is possible that POC-US in some cases will be able to replace more advanced examinations in the secondary healthcare sector and improve success in therapeutic procedures. However, POC-US is a user-dependent examination which entails a risk for misinterpretations. Furthermore, the introduction of POC-US as a diagnostic tool will in some patients lead to overdiagnosis and incidental findings causing increased concern in patients, the need for extra examinations, and visits in the healthcare system without benefit. These harms must be weighed against the benefits. Therefore, there is a need for knowledge regarding the use of POC-US in Danish general practice.

Objective:
To explore Danish GPs experiences with POC-US.

Methods:
Through an explorative phenomenological approach we will use one-on-one semi-structured interviews with both GPs who use POC-US in their daily work and GPs who do not. The GPs are recruited stepwise and selected based on demographics, experience with POC-US, organizational aspects of the clinic, and experience as a GP. The aim is maximum variation and we will include 20 GPs. The interviewguide has been developed through literature search, focus groups, and discussions in the research group. The interviewguide covers the central domains: aspects of use, incentive, experience and training, consequences, diagnostics and implementation. Transcripts and analysis will begin immediately after conducting the interviews. The analysis is conducted as systematic text condensation.

Results:
The preliminary results reveal considerations about appropriate and inappropriate use of POC-US in general practice. The GPs who use POC-US describes a fascination of the technology, an increased satisfaction in their professional work, and a belief that they are improving patient care. The GPs described awareness of the limitations of the technology and in their own skills as GPs. They also expressed frustration about the lack of acknowledgement from specialists.

We will present the final results at the conference.

Conclusion:
We hope this study can provide a foundation of knowledge about POC-US in Danish General Practice, which will enable us to guide further clinical studies and a potential implementation strategy.

OP164 Use of immunochemical faecal occult blood test in general practice on patients presenting non-alarm symptoms of colorectal cancer

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Background:
Many countries have implemented cancer patient pathways for patients presenting alarm symptoms of colorectal cancer (CRC). However, 50% of CRC cases presents with non-alarm symptoms that do not fulfill criteria for urgent referral. Immunochemical faecal occult blood test (iFOBT) may be useful for this group of patients to detect blood in stools and identify whom to refer to colonoscopy.

Objective:
To investigate how iFOBT is used to detect CRC in patients with non-alarm symptoms of CRC in general practice.
and examine the results of the use.

**Material/methods:**
During the one year study period, iFOBT was implemented in 385 general practices in the Central Denmark Region. At inclusion, GPs received an intervention consisting of: (1) A continuous medical education on CRC and iFOBT use, (2) A guideline on iFOBT use in general practice and (3) A logistic setup of ordering and analysing iFOBT. The test was used on patients of ≥30 years presenting non-alarm symptoms of CRC and if an iFOBT was positive (≥50μg/L) the patient was referred to colonoscopy using the cancer patient pathway for CRC.

**Results:**
Preliminary results show that 3641 iFOBTs were requested during the study period (median patient age: 62 years (IQR 50-71)). Of valid tests, 568 (16%) were positive (median patient age: 68 (IQR 56-77)). The positivity rate increased with age and was higher for men compared to women (17% vs. 15%). 57 patients were diagnosed with CRC after performance of iFOBT. Three CRC cases were diagnosed after a negative test result. The positive predictive value (PPV) of CRC when the GP ordered the iFOBT was 1.6% and for a positive iFOBT 9.5%.

**Conclusions:**
The study is the first to investigate the use of iFOBT on patients presenting with non-alarm symptoms of CRC. The results suggest that iFOBT is a relevant test to detect CRC in this group of patients and has a PPV just below alarm symptoms. Still, GPs should be aware of the risk of false negative test results and use iFOBT as a rule in test.**Keywords:** Colorectal cancer, early diagnosis, general practice, iFOBT.

**OP165 NYGP - NORDIC YOUNG GENERAL PRACTITIONERS A new network for young GPs within NFGP**
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**BACKGROUND**
At the Nordic Congress of General Practice in Gothenburg in 2015, a group of young GPs and GP trainees from different Nordic countries came together and discussed the need for a forum where they could communicate with each other across borders. We face many of the same challenges in our countries and it only seemed as a natural next step to share our knowledge, ideas and experiences in order to improve the quality of our education and the further development of general practice. From October 14th to 16th 2016, a group of 14 young GPs and GP trainees from Denmark, Sweden, Norway, Finland, Iceland, and the Faroe Islands met in Iceland to found the Nordic Young General Practitioners network – the NYGP. This was made possible with generous financial support from the Nordic Federation of General Practice (NFGP). AIMS To establish a framework where Nordic young GPs (both trainees and newly established GPs) and medical students interested in general practice can come together in a friendly environment to build long lasting personal and professional friendships and to work together to formulate viable solutions to the challenges that general practice face in our countries. The NYGP network aims towards becoming the scientific and social melting pot of ideas, attitudes, knowledge, skills, and experiences in the Nordic countries. The shared values are participation, cohesion and commitment – like an extended family. We seek to keep every member clinically competent and at the same time building confidence through mentoring, nurturing, and facilitation.

**METHODS**
The very first step has been taken this spring, where the NYGP has arranged the first Nordic Pre-Congress of General Practice (NPCGP). The ambition is to continue to arrange Pre-Congresses each second year and in relation to this, facilitate clinical educational experiences in the shape of practice visits. In addition, NYGP plans to arrange Nordic Seminars of Primary Health Care every other year to stimulate continuous professional development in Nordic general practice. RESULTSSo far we have established the first ever pre-congress in relation to the Nordic Congress of General Practice.

**CONCLUSIONS**
It is our firm belief that a closer collaboration between the Nordic young GPs and GP trainees can only be seen as an advantage for the individual as well as for General Practice as a whole.
**Key words:** general practice, alcohol-related disorders, computerized patient records, early diagnosis

**Background:**
The link between alcohol consumption and numerous health problems is strong. The preferred method for identification and treatment of risky or harmful drinking has, for the past decades, been screening and brief intervention (SBI), but the effectiveness of SBI in general practice is questionable. Recently, approaches based on clinical relevance instead of screening measures have been studied. Health incidents or changes in the patient’s life are used as indicators of potential relevance for addressing alcohol. This has been coined pragmatic case finding or semi-systematic method, both focusing primarily on clinical signs, and targeted screening in some routine situations. Not only the patient’s present health problem, but also previous incidents may indicate relevance for talking about alcohol.

**Objective:**
To explore whether information regarding potentially alcohol-related health incidents recorded in electronic patient records might aid in earlier identification of alcohol use disorders.

**Material/methods:**
We extracted potentially alcohol-related information in electronic patient records from 20,764 patients over four to 21 years in nine GP surgeries and tested if alcohol-related diagnoses, prescriptions of codeine, tramadol, ethylmorphine and benzodiazepines; elevated levels of gamma-glutamyl-transferase (GGT) and mean cell volume (MCV); and new sick leave certificates predicted specific alcohol use disorder. The data was analyzed with Cox proportional hazard analysis with time-dependent covariates of potential accumulated risks over the previous 4 years.

**Main outcome measures:**
Time from inclusion until the first specific alcohol use disorder, defined by either an alcohol specific diagnostic code or a text fragment documenting an alcohol problem.

**Results:**
In the unadjusted and adjusted Cox-regression with time-dependent covariates all variables were highly significant with adjusted hazard ratios ranging from 1.25 to 3.80. Addictive drugs, sick leaves, GGT, MCV and International Classification for Primary Care version 2 (ICPC-2) and International Classification of Diseases version 10 (ICD-10) diagnoses were analyzed. Elevated GGT and MCV, ICD-10-diagnoses, and gender demonstrated the highest hazard ratios.

**Conclusion:**
Many frequent health problems are potential predictors of an increased risk or vulnerability for alcohol use disorders. However, due to the modest hazard ratios, we were unable to establish a clinically useful tool.

**Discussion:**
Whether and how information recorded in electronic patient records may increase the physician’s and hence the patient’s awareness of the relevance of alcohol in many health problems and diagnoses.

**OP167 Clinical drug trials in general practice: How well are external validity issues reported?**

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**Background:**
When reading a report of a clinical trial it should be possible to judge whether the results are relevant for your own patients, issues affecting the external validity or generalizability of a trial should therefore be reported. There is no international consensus or a standardized norm or method for judging the applicability of a trial for general practice.

**Objectives:**
Our aim was to determine whether papers with published results from a complete cohort of drug trials conducted entirely or partly in general practice gave sufficient information about the trials to consider the external validity.

**Material/methods:**
A cohort of 196 drug trials in Norwegian general practice was previously identified from the Norwegian Medicines Agency archive with year of application for approval 1998-2007. After comprehensive literature searches 134 journal papers reporting results were identified, with papers published 2000-2015. We considered the reporting of the following issues relevant for external validity: reporting of clinical setting, screening of patients prior to inclusion, reporting of patients’ comorbidity and co-medication, choice of primary outcome and reporting of adverse events.

**Results:**
Preliminary analyses of the 134 papers show that 30 (22 %) reported the clinical setting of the trial. The number of patients screened prior to enrolment was reported in 61 papers (46 %). The primary outcome of the trial was a surrogate outcome for 60 trials (45 %), a clinical outcome for 39 trials (29 %), and a patient reported outcome for 25 trials (19 %). Clinical details of adverse events were reported in 115 (86 %) of papers. The reporting of patients’ comorbidity and co-medication will be presented at the congress.

**Conclusion:**
The clinical setting of the trials and the selection of patients prior to enrolment was often not reported, limiting the possibility to consider the generalizability of a trial. It may therefore be difficult for readers of general practice drug
trials to judge whether the trial results are applicable for use in clinical decision making in general practice or when developing clinical guidelines.

OP168 The method of relative importance in general medicine data

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Background
A common research question is the identification of factors that are most important relative to some process, e.g. which socio-economic characteristics relate most to the prevalence of diabetes, thereby identifying a focus for intervention. This is not a proper epidemiological hypothesis, and the common use of some sort of model selection in multivariable regression models to this aim is a mistake. We propose to use the method of relative importance to solve this problem.

Material/Methods
The method of relative importance is a method that is relatively well known in the fields of organizational theory and psychology. The general idea is to divide the coefficient of determination ($R^2$) of a multivariable linear regression model into the parts corresponding to each of the explanatory variables in the model. This is done by examining all possible multivariable models that may be constructed by the set of explanatory variables. We have generalized this method so that it can deal with statistical models other than linear regression (e.g. logistic regression), and so that an exhaustive walkthrough of all possible models is not needed which makes it possible to examine larger sets of factors.

The method is illustrated and discussed using the GESUS data, which contains on a large (n = 20236) number of citizens (in Naestved municipality) demographic information and certain measurements, e.g. long-term blood sugar, cholesterol, etc., and an indication whether the person is diagnosed with type 2 diabetes.

Results
By using the method of relative importance we partition the fit of the model into the contribution of each of the variables in the GESUS data. We see that BMI accounts for 34% of the fit, while marital status accounts for only 0.1%; and in this manner we rank all variables to their importance for being diagnosed with type 2 diabetes.

Conclusion
The method of relative importance directly addresses the research question of which factors are most important. The method, notably after our additions, is simple to use, always converges, and the relative importance estimates are robust. It is an excellent way to get a better understanding of the set of variables potentially related to one’s outcome.

OP169 Inequality in health. Can GP contribute to reduce this by increasing self-efficacy.

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Objective:
Qualitative analysis of the resources mentioned by vulnerable younger primary care patients after the first of two structured preventive consultations at the personal GP with focus on self-efficacy to obtain 1-2 self-chosen goals to better life circumstances or life style.

Background:
Increasingly inequality in health is seen also in welfare states as the nordic countries. Seems to be worse in Denmark in spite of free access to own GP. Vulnerability to every day’s problems increases the more problems you have. Results are among others: doubt in own ability to manage everyday life and obtain stability and good contact with friends, family and primary care as base of health ressources. Contact with GP often results in misunderstanding and unagreed agenda because of low ability to explain and understand complexity.

Material/Methods,
After screening 20-44 years old patients (n= 2056) for vulnerability (psychosocial resources and life style) at arrival to the clinic, 495 participated in the randomised study. Problems were i.e. low confidence in own ability to manage everyday life and obtain stability and good contact with friends, family and primary care as base of health ressources. Contact with GP often results in misunderstanding and unagreed agenda because of low ability to explain and understand complexity.

Results
5 categories were mentioned: Own constitution: mostly „strong will“ and „stubbornness“, but also many other positive words for constitution. Network was often mentioned to be used as support or „mirror“ to change, most often family.
Own experience with the same or similar problem. Knowledge was also often mentioned, but just a few mentioned, if they had used this knowledge before. Many described need to release resources specially i.e. to work with a psychological problem, before trust in own ability to obtain their second prioritized lifestyle goal could be mobilized.

Conclusion
Structured health conversation to young patients with many psychosocial problems with focus on their needs and goals can support specific self-efficacy and increase probability to changes in life circumstances and life-style.

OP170 General practitioners’ gender and the gynecological examination A survey among GPs in Western Norway
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Introduction
Little is known about the indications general practitioners (GPs) perceive as relevant to perform gynecological examinations (GEs). Neither do we know to what extent GPs master the practical parts of this procedure and associated procedures such as the insertion of intrauterine devices (IUD), or how they manage and negotiate the personally intrusive nature of GEs. In this study, GPs in Norway answered a questionnaire about these matters.

Methods
During practical training in general practice in 2015, 70 medical students at the University of Bergen distributed a questionnaire to all 175 GPs in the practices they visited in Western Norway. The questionnaire comprised questions about routines related to GEs - including the presence of other staff during GEs, pap smears and bimanual palpation, antenatal and postnatal examinations, and routines when inserting IUDs. We also asked about circumstances where the GPs decided not to do a GE although the patient presented with a gynecological problem. The GPs responded using a five-point scale: ‘never’, ‘seldom’, ‘now and then’, ‘often’, and ‘always’. Data about the GP’s age, gender, specialization, localization (urban vs rural) were also recorded. Statistical analyses included chi-square tests and multiple logistic regressions with unadjusted (OR) and adjusted odds ratio (AOR) and 95% confidence interval (95% CI), adjusting for age, gender, specialization and localization. In this abstract we only report adjusted results.

Results
Out of 175 invited GPs, 152 (87%) answered the questionnaire. We found large variations in routines and use of GEs according to the GPs’ gender. Male GPs significantly more often had other staff present during GEs compared to female GPs, with an AOR of 9.1 (1.1-74.8). When patients came for pap smears, male GPs tended to do bimanual palpation significantly less often than female GPs, with an AOR of 0.3 (0.1-0.6). Male GPs did GEs significantly less often than female GPs at postnatal care visits; AOR 0.2 (0.1-0.6). Male GPs significantly more often than female GPs omitted GE when the patient wanted a referral to gynaecologist, 3.1 (1.3-7.2); when the patient was anxious about the GE, 3.8 (1.5-9.4); when there was some kind of relation between the GP and the patient, 2.4 (1.2-5.3), or when the GP already had decided to refer to a gynaecologist based on the patient’s symptoms, 2.5 (1.1-5.4).

Conclusion
The GP’s gender had an impact on the decision to perform a GE or not. Sometimes, male gender is associated with adherence to recommended practice (e.g. no indication for bimanual palpation when doing pap smear screening). However, the findings also indicate that male gender sometimes is a barrier to proper medical evaluation of pelvic symptoms in women.

OP171 Praksismatch.dk - The Danish GP matchmaker site
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BACKGROUND
One of the biggest challenges in Denmark in general practice during the next ten years is the recruitment of doctors. Many young doctors are settled in the major cities long before they choose where to finish their vocational training. This makes them hard to move and often their choice of place to work and/or buy is based on convenience (i.e. geography) rather than considerations on education, collegial network or academically challenging environments. FYAM (The Danish society of young general practitioners) believe that this can be changed through information and inspiration about all the existing career choices general practice offer.
AIMS
The aim of Praksismatch is to increase the interest in general practice among young doctors and in particular increase the number of GP’s and GP trainees settling outside the major cities.
We will achieve this by building a website that collects profiles of all GP clinics in Denmark. GP trainees and medical students with an interest in general practice, will be able to create profiles to search for vocational training, locums or clinics to buy. It is also the aim that it will be the primary website on which GP clinics will be put up for sale.

METHOD
To create a profile on the website, GPs and GP trainees will register with their doctor ID from the Danish Medical Association. This will keep the website protected for external (mis)use. GP clinics can fill in their profiles from a template on the page and along with the profile there is a personal questionnaire for each GP and GP trainee. The questionnaire is integrated on the website and represents a simple match tool for the GP trainee to use regardless of geography, when searching for their vocational training. Furthermore, the site will bring an overview and comprehensive information on practices for sale and available locums.
The match between tutor GP and GP trainee is calculated when they have both answered the questionnaire. The answers will characterize the GP trainees’ „dream practice” in terms of values, organization, working conditions and educational conditions. The same will apply in the match between a GP who wants to sell his practice or hire a locum and the GP who wants to buy or be a locum.
Praksismatch is developed by FYAM, who is currently negotiating with PLO (Organisation of General Practitioners in Denmark) on PLO buying and hosting the website.

RESULTS
The website was launched as a beta version in September 2016 and is currently undergoing further development.

CONCLUSION
We believe that the website with the concept of „matching” GP trainees and GPs can contribute to increase the interest in general practice among young doctors and in particular an increase in the number of GP’s and trainees settling outside the major cities.

OP172 Measuring the effect of teaching communication skills. A new method (DanOBS)
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Introduction:
Until now the learner’s communication skills has been evaluated by the teachers using various rating scales, interviews of students, use of self-efficacy questionnaire or by surveys (1, 2, 3).

Material and method.
Based on DanSCORE (4) we have developed and validated a new questionnaire for undergraduate medical student when analyzing consultations. The new questionnaire consists of 17 items and the theoretical framework is the patient centered method. Letting the students before and after the course analyze the same test video and fill in a questionnaire, functions as a pre- and posttest. Outcome is change in answers from before to after.

Result.
The method will be presented for discussion at the conference.

4 www.GP-and-patient.com

S01 Key Writings in General Practice: The Core of a Discipline and Formation of its Practitioners
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Background

General practice is an old medical occupation but a young academic discipline. In contrast to the increasingly narrow and hyper-specialised medical disciplines within secondary and tertiary care, GPs aim to offer essential, comprehensive, cost-effective healthcare to whole persons in the context where they live. This is in many respects a daunting task, but always has the potential to be “the most fascinating and absorbing and rewarding job in the world...” Most practitioners and even many GP researchers have limited knowledge of how “key writings” have played a crucial role in the foundation of the ethos of general practice and the know-how of its practitioners. In our different locations and settings, we who organize this symposium observe an increasing interest in these “canonical” writings, ranging from their role in the formation of Irish GP specialists, via PhD education of Norwegian GP researchers, to WONCA’s recent publication of a „Classic Papers“ anthology.

The aim of this symposium is to increase GPs’ collective knowledge about and enthusiasm for essential historical writings that bind us to the core of the discipline, representing its foundation, contributing strongly to its formation and – hopefully - illuminating good pathways to the future.

Introductory lectures and main messages:

Chairpersons Hjörleifsson and Getz set the scene.

Iona Heath: Inspiration and solidarity: words that bind us to the core. Iona will explore the almost magical power of words and will also describe the creation of WONCA’s Classic Papers anthology.

Niall Maquire: Key writings in GP Training: Antidote to a reductionist curriculum? Niall will report an enquiry among teachers and trainees in Irish general practice. Two themes will be described. Theme 1) The Teacher: How important are such writings in the motivation of teachers? May canonical texts clarify the teaching mission? How do we select our canonical texts and can we agree among teachers as to what is essential? Theme 2) The Student: Are such core texts useful to all trainees? Do trainees derive value from key writings and how? What other portals are used to achieve this soft learning in GP training?

Linn Getz and Elin Rosvold will present Academic Canon: a PhD course in the Norwegian GP Research School.

After these presentations, we invite questions, debate and ideas for the future. The idea of „a Canonical curriculum“ is still in the making and your contribution is most welcome!

S02 Gynecological cancers - challenges for the general practitioner and the healthcare system

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Background

Gynecological cancers constitute more than 12% of all cancers in women. In the Nordic countries, more than 6000 women are diagnosed with a gynecological cancer each year. The cancers differ in etiology, symptomatology and prognosis. Furthermore, they constitute different diagnostic challenges to the general practitioner and the healthcare system.

The majority of gynecological cancers are diagnosed through general practice, and general practitioners play a pivotal role in both screening and evaluation of symptomatic patients. A general practitioner will, on average, experience only one new gynecological cancer in their practice population every second year; this challenges the ability to gain expertise in the field. However, symptoms of potential malignancy are seen frequently, and the risk of missing a diagnosis of serious disease is omnipresent.

The aim of the symposium is to present information about gynecological cancers and to discuss with general practitioners the challenges and possible solutions concerning these cancers (i.e. cancers of the cervix uteri, corpus uteri, and the ovaries). Furthermore, we will also address the challenges for the healthcare system in general. At the end of the symposium, participants should have gained more insight into the presence of gynecologic cancers, symptoms, clinical presentation, and investigation of gynecological cancers. Additionally, participants should be aware of potentials for improvement.

Content

The symposium will address the following topics:

Epidemiology of gynecological cancers
Frequency of gynecological symptoms in the general population and related healthcare seeking
Symptoms indicative of cancer and the Danish urgent referral pathways (kræftpakker)
Discussion of challenges faced by the general practitioner and organizational tasks in the healthcare system related to diagnosis of gynecological cancer

Method

How can the outcomes for gynecological cancer patients be improved in the future?
The symposium will consist mainly of lectures, but it will also include discussions with peers.

**Key Words:** Gynecological cancer, diagnosis, cancer, symptoms

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**S03 Management of gastrointestinal infections in the Nordic countries**

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2Department of Global Public Health and Primary Care, University of Bergen, Norway

**Background**

Acute gastroenteritis is an infection characterized by sudden onset of diarrhea that has lasted for at least 24 hours. It is often accompanied by other symptoms like abdominal cramps, nausea, vomiting, fever, and bloody stools. Usually it is a self-limiting condition where symptomatic treatment and fluid replacement therapy is sufficient. It is a common condition worldwide. It affects between three and five billion people annually, mostly in low income countries where it is a major cause of death, especially among children. In the Nordic countries gastroenteritis is rarely a fatal disease, but it is still prevalent and often presents in outbreaks. European studies have estimated an incidence of 0.2-1.5 episodes per person per year.

A range of different viruses, bacteria, and parasites may cause acute gastroenteritis. In most cases the causative microorganism cannot be inferred from the symptoms and disease trajectories. Specific diagnosis will depend on analysis of stool samples, but as most cases resolve quickly without treatment further investigation is seldom needed.

Most cases of gastroenteritis will resolve without complications, but some patients will develop post-infectious conditions. Studies have demonstrated an increased risk of irritable bowel syndrome (IBS) up to ten years following bacterial and parasitic infections. IBS is a multifactorial condition and no specific treatment exists. It is a common and chronic condition and hence constitutes a great challenge to the society and the health care system.

**Content**

- Epidemiology of infectious gastroenteritis: We will present an overview of the incidence and time trends of acute gastroenteritis and known outbreaks in the Nordic countries.
- Diagnosis and treatment: Most cases of gastroenteritis can be managed without further investigations or specific treatment. We will present cases where stool samples should be collected, and when antibiotic treatment is warranted.
- Post-infectious complications: We will report the results of several studies showing strong evidence that acute gastroenteritis is a trigger of IBS and other conditions like chronic fatigue and functional dyspepsia.
- Management of IBS: There is no curative treatment for IBS but several symptom-relieving measures may be of benefit and should be offered in a step-wise approach.

**Main message from speakers**

Acute gastroenteritis is a common disease in the Nordic countries. Most infections are self-limiting and should be managed without antibiotics, but care should be made to provide proper management in case of severe and fulminant infection. Post-infectious complications, like IBS, are common and may last for several years after the acute infection. These conditions will mainly be managed in primary care by general practitioners.

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**S04 Psychological stress - consequences, diagnosis, prevalence, treatment and prognosis**

Jesper Lykkegaard, Morten Fenger-Grauer, Marie Germund Nielsen, Kaj Sparre Christensen, Marianne Rosendal

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2Research Unit for General Practice and Section for General Medical Practice, Århus, Denmark
3Research Unit for General Practice, Aarhus University, Århus, Denmark
4Research Unit for General Practice, Aarhus University, Århus, Denmark

**Background:** Psychological stress is a cryptogenic but frequent condition that often causes long-lasting absence from work, reduced quality of life and increased risk of severe diseases.

**Content:** The symposium includes five presentations of recent research on the subject of patients with psychological stress in general practice.

**Main messages from speakers**

How is the Perceived Stress Scale score associated with future usage of healthcare resources and overall prognosis? AP presents results of a cohort study following 118,410 persons for four years using the Danish National Health Survey and health registries.

The Perceived Stress Scale-10 is widely used for measuring psychological distress, but are the answers of the individual items consistent to be used on a one-dimensional scale? MGN presents results of testing the answers of
32,374 persons in the 2010 Danish National Health Survey. How often do GPs with different characteristics and working in socioeconomically different areas encounter patients who they consider to have psychological stress? What characterises the patients and the chosen treatment? JL presents results of an audit using the APO-method. Severe bereavement, such as loss of a child or young spouse, increases the risk of suicide or admission to a psychiatric hospital. Does GP conversational therapy and antidepressive medication reduce this risk? MFG presents results of a study including 207,435 severely bereaved people. Problem-solving therapy is a behaviorally orientated approach to teaching problem-solving skills that are generalizable to a range of stressful problem situations. KSC presents results of a randomized trial on the feasibility and effectiveness of teaching problem solving techniques to GPs. KSC.

Chairs: MR and TV
Keywords: Psychological stress, Perceived Stress Scale, conversational therapy, antidepressive medication, problem-solving therapy and questionnaire validation.

S05 Everyday life among patients with multimorbidity and how GP’s attend to it.

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Background
General practitioners meet patients with more than one chronic health problem every day in the clinic, and treatments and plans for rehabilitation are made. Thereby, the patients experience an increase in the „burden of treatment“, a concept that will be explained in the symposium. Different patient groups cope with multimorbidity in various ways, and at the symposium we will present data about care seeking and self-care among men with multimorbidity, perspectives of patients with lowered self-care ability, and priority settings in patients with cancer and chronic diseases.

Content
In this symposium we will present data from various projects concerning everyday life among patients with multimorbidity and discuss how GP’s attend to it.

„Structural Vulnerability and Health Risks of Elderly Men with Multimorbidity“. Presenter Alexandra Ryborg Jønsson
„Life goes on… Priority settings in patients with cancer and comorbidities“. Presenter Anne Arreskov
„Living with diabetes and concurrent chronic conditions – a qualitative study of the perspectives of patients with lowered self-care ability“. Presenter Mads Kristensen
„Patient-experienced burden of treatment in patients suffering from multimorbidity – a systematic review of qualitative data“. Presenter Michael Rosbach
„What do GPs actually know about their patients as persons?“ Presenter Bente Prytz Mjølstad

Method
During the symposium we will introduce the field and present the abstracts above. The symposium will be concluded by a panel discussion by the presenters addressing how to improve attention to the problems of everyday life of the patients with multimorbidity in general practice.

Moderators: Anne Møller and Ann Dorrit Guassora

Keywords: Multimorbidity, everyday life, general practice, person, qualitative

S06 ‘Well-being and health problems in pregnancy, childhood and adolescence with a focus on environmental conditions’

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3University of Helsinki, Helsinki, Finland
4University of Tampere, Tampere, Finland

BACKGROUND
Not every child can reach his or her potential. Epidemiological, clinical and experimental studies demonstrate that environmental conditions during fetal development and childhood impact upon later physical and mental health. How can we pay more attention to environmental conditions in antenatal care and scheduled developmental assessments for children who experience hostile environments?

CONTENT
We shall present the following studies, followed by plenary discussion of environmental factors to be considered in
the relevant populations.

**ML: Do physical symptoms worry women during the first trimester of pregnancy?**
Method: 1458 pregnant women in the first trimester answered a questionnaire about 10 selected common pregnancy-related symptoms and the associated concern.

**RE: Sleep quality in early pregnancy**
Method: Questionnaire about sleep including the severity of problems and worry about them. Background variables: pregnancy-related symptoms, sociodemographic characteristic, psychological health (depression and anxiety) and previous pregnancies.

**PW: Assessing parent-infant interaction in the consultation**
Parent-infant interaction is a crucial determinant of later health but there are no clinically useful tools that GPs can use to evaluate these interactions. We have developed a simplified version of a parenting observation system so it can be more easily used by in day-to-day practice as well as research.

**AG: When mum was bald - children growing up with parental cancer**
A cross-informant qualitative study of families where a parent has cancer. Interviews were conducted with 18 parents (11 patients) and 15 of their children (7-15 years old). Focus for the interviews were parents and children’s experience of the impact of cancer on the children’s daily life, health and well-being.

**KN: Evaluation of school doctors’ check-ups in South Finland**
Prospective controlled multicentre trial. Before the school doctor’s check-up, the parents, nurses and teacher fill a questionnaire to identify any potential worries about the student. After the health check the doctor fills an electronic report including possible given instructions, significant discussions, diagnoses and follow-up plans and his/her estimate of the benefit of the appointment. Student and the parent fill feedback forms where they evaluate the benefit of the health check.

**VA: Peer bullying, victimization and fibromyalgia**
Prospective follow-up with data from The Health and Social Support study. Questionnaire administered to 64,797 individuals, including questions on aspects of peer bullying. Two follow-up questionnaires were sent to respondents. Self-reported fibromyalgia symptoms were obtained from these questionnaires and their association with bullying will be reported.

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**S07 Patients with immigrant background - challenges and possibilities when meeting our fellow citizens**

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4University of Limerick, Ireland
5Lund University, Sweden

**Background**
Migration to Europe has grown the last decades with a culmination in 2015. Millions of people have been forcibly displaced as a result of war, political conflicts or other human right violations. Other people migrate in search for better working conditions or to reunite with family members. Although the main flow of asylum seekers goes to adjacent countries and central Europe, several thousands immigrants have lately arrived to the Nordic countries and challenged most health care services. At arrival, necessary health care is provided for asylum seekers with the first focus on infectious diseases, immunisation schedules and mental health support. Increasingly early, however, asylum seekers, as well as other migrants, come in contact with primary health care provided by general practitioners (GP).

Challenges in the clinical encounter with patients with immigrant background go beyond the prevalence of exotic diseases and are often related to cultural differences between patients and providers, but also to factors like low health literacy, diverse expectations, lack of trust or factors related to the health care systems. GPs in Europe, on the other hand, generally lack systematical training to meet cross-cultural consultations. Furthermore, long administrative processes and lack of educational and training resources in most countries prevents a timely career reestablishment for newly arrived health professionals desiring a new job as physicians, nurses or dentists that could act as a bridge between cultures.

**Content**
In this symposium we aim to give an overview over the implications of migration on health and offer tools to improve the outcomes of cross-cultural consultations. We will also share a new approach for teaching GPs to be better doctors for vulnerable patients and present a proposal to integrate health professionals with refugee status in health care.

**Method**
A serious of short presentations followed by plenum discussion: The present situation -setting the scene The history of migration Cross-cultural and cross-linguistic consultations: how can we better? Teaching GPs to be better doctors for vulnerable patients. An example from Ireland A new approach to integrate health professionals with refugee status in Swedish healthcare.
S08 Management of medically unexplained symptoms in general practice.

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2Institute of Public Health, Odense, Denmark
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Background
Medically unexplained symptoms (MUS) are conditions characterised by symptoms without objective findings, such as chronic fatigue syndrome, fibromyalgia and irritable bowel syndrome. Patients with persisting MUS are very common in general practice. Nevertheless, these encounters may lead to frustration for general practitioners (GPs) and not least dissatisfaction for the patients. Patients with MUS are often referred to unnecessary investigations in secondary health care, which are costly and potentially harmful. Over many years research has described challenges regarding the management of this group of patients especially in primary care. Educational programs for GPs have been developed and tested; yet, both medical students and doctors call for more knowledge and skills with regard to management of patients with MUS.

Content
Introduction MUS and symposium, Aase Aamland (5 minutes)
a) Helpful strategies for general practitioners seeing patients with medically unexplained symptoms. A focus group study. Aase Aamland. (15 minutes)
b) What is the problem with medically unexplained symptoms for GPs? A meta-ethnography. May-Lill Johansen. (15 minutes)
c) Effective management of unexplained physical symptoms in primary care. A review. Marianne Rosendal. (15 minutes)

Discussion, lead by chair Kirsti Malterud and co-chair Rikke Sand Andersen (10 minutes)

Method/main message from speakers
a) GPs have not only frustrations within this field, but also successful experiences which deserve to be shared. In this focus group study we aimed to explore GPs strategies, which they had experienced as helpful when seeing patients with MUS.
b) To gain a deeper understanding of challenges faced by GPs when managing patients with MUS, we performed a meta-synthesis of qualitative studies. We found that for GPs, the challenge with MUS is most importantly at an epistemological level, implying a need for new models of disease that integrate knowledge from all relevant disciplines.
c) An update based on a recent concise review of various aspects of primary care management will be presented. The review was based on Cochrane and systematic reviews of doctor-patient interaction, enhanced care in general practice and specialized treatment approaches.
The symposium will be concluded with a debate about important issues to pursue in future research on treatment of MUS in general practice.

Keywords: Somatoform Disorders; General Practice; Qualitative Research; Review

S09 How should we approach practice variation? Standardization versus contextualization.

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Background:
Variations in the utilization of health care are ubiquitous, and their causes are complex. Although such variations may be legitimate, for example due to differences in clinical need or patient preferences, the current discourse is focused on unwarranted practice variation. Clinical guidelines and standardized clinical care pathways are implemented to alleviate this problem. However, research evidence underpinning these measures is intrinsically devoid of patient context. Inattention to patient context is an unrecognized and understudied cause of medical error. In terms health care outcomes and costs contextual errors may have undesirable consequences comparable to those of non-adherence to guidelines and lack of standardization.

Content:
We present research that may serve as examples of unwarranted practice variation as well as contextual errors. Furthermore, we aim to discuss how practice variation can be measured and understood. Five focused presentations are followed by a general discussion with the audience. Presentations are briefly outlined below.

Methods and main messages:
1. Based on data from 4350 consecutive consultations Unni Ringberg studied variation in GPs' referral practice.
There were striking differences in reasons for referral, and GPs referred patients even when they didn’t expect them to benefit.

2. Andreas Pahle analyzed claims data for variation in surgical procedures and insertion of intrauterine devices (IUDs). In 2013 one out of four GPs never claimed reimbursement for insertion of IUD and certain other procedures.

3. Using undercover patients in real life consultations, professor Alan Schwartz and Saul Weiner have shown that inattention to patient context is common. Furthermore, even when contextual red flags are recognized, this information is often not used to tailor health care plans to individual patients, leading to unfavorable outcomes and excessive costs.

4. Trygve Deraas have been heavily involved in using registry data to explore variations in use of specialist health care. He will discuss how practice variation can be measured and understood based on own research and influential publications.

5. Evidence based medicine (EBM) is the underpinning of clinical guidelines and standardized clinical pathways. Informed by theoretical considerations and empirical data, professor Ivar Sønste Kristiansen asks: What is the evidence (sic!) that EBM leads to better patient outcomes?

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**S10 Turning Narrative? Reinventing and refining narrative skills as a core competence in General Practice**

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**Background and aim:**

Storytelling is a defining feature of humanity. The patient’s story (= a certain type of narrative) is evidently essential in medicine. The term narrative medicine (NBM) is however young, dating to the 1990s. NBM can mean different things. It often refers to a „humanistic” interest in human illness experiences, the nature of suffering, and development of professional empathy. NBM may also refer to the way medicine is effused with powerful „stories” and metaphors (e.g., „prevention is better than cure”, „the war against cancer”, „the cellular machinery”). NBM also refers to therapeutic methods, some with relevance for general practice.

GP innovators Trisha Greenhalgh and John Launer suggest narrativity as a lens through which one may regard the whole endeavor of general practice. We agree and think NBM can facilitate a transition from patient-centredness to even more effective person-centred healthcare. Here, doctors and patients are better equipped to jointly address issues that really matter, including the „storyline” into which each clinical encounter or illness episode fits. In this context, we are interested in how GPs work with cues, i.e. perceived signals or pointers to issues of considerable significance. Current consultation skill programs emphasize responsiveness to patients’ emotional cues. We also find it meaningful to speak of biographical and narrative cues in the patient’s (hi)story.

The notion of biographical cues opens yet another perspective that has hardly been dealt with in international writings on NBM, the fact that meaning matters, in a literal sense. A person’s (or even social group’s) biology and biography are intricately interrelated. Epidemiologist Nancy Krieger refers to this as embodiment. During the last 20 years, many empirical studies have added weight to this argument; keywords are psycho-neuro-immunology, epigenetics and neuro-imaging. 20th Century molecular medicine was based on a machine metaphor that was quite alien to general practice. The emerging new insight might bring biology back to life as we know it.

The aim of our symposium is to explore the scope and potentials of narrative thinking in general practice. Discussions of potential pitfalls are also welcome.

**Content and main messages:**

The chairman set the scene. Lotte Hvas will give the overview Narrative medicine: something old, something new... Linn Getz will present „But I come with stories”: Biology and biography in a narrative perspective”. Bente Prytz Mjølstad will reflect on narratives from her Phd „Knowing patient as persons”. Marianne Ranneberg will present a focus group study among GP teachers: Life experiences and health – a professional concern? The floor will be opened for debate.

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**S11 Self-rated health and its relevance for general practice and public health**

Eivind Meland¹, Göran Waller², Øystein Hetlevik¹, Annika Forssén², Tora Grauers Willadsen³, Hans Johan Breidablik⁴, Tina Løkke Vie⁵, David Jahanlu⁶
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⁶Atlantis University College, Norway
Background:
The patients’ own health perception, measured by a single question, known as SRH, has shown to predict future morbidity, use of health services, and mortality. Those with poor ratings were worse off than those with good ratings. Although research on this topic is rather unequivocal, research from the transition between adolescence and adulthood is scarce. What is there in self-rated health that make it a relevant predictor for future health? How can it be a relevant subject in GPs’ consultations? What is the strengths and weaknesses for its use in public health research? What are the time trends and its relation to symptomatic disease in a Nordic context?

Content: Based on our own studies and the literature we will present findings of SRH as a prognostic marker; SRH’s role in diabetes care; adolescent SRH as predictive for later medication use, health care attendance, and mortality; SRH in consultations in General Practice. Finally we will together with the participants in the seminar discuss:

- Do the patients have a personal knowledge of some resources and risks that we as GPs do not pay attention to?
- Why do patients rate their health as they do? Does knowledge about the patients’ reasons for their measure provide information about what may increase their health?
- What are the reasons that adolescents rate their health as good or unsatisfactory?
- Are there interventions that can strengthen SRH?
- How can we use SRH in General Practice and to what benefits and costs?

Method:
Seminar method
Short presentations
Plenary and small group discussions.

Disclosure of Interest: None Declared

Keywords: Chronic illness, Clinical use, Physiological background, Self-rated health

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S12 How to conduct research on overdiagnosis in cancer screening

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Background
Cancer overdiagnosis is the diagnosis of cancer that is not destined to cause symptoms, lead to morbidity, or cause death. Therefore, treating a person with an overdiagnosed cancer cannot, by definition, improve the patient’s prognosis, and can therefore only be harmful.

The greatest methodological challenge in cancer overdiagnosis research is that – at the level of the individual, we can never be sure who is overdiagnosed. However, signals of overdiagnosis are available at the population level. In randomised controlled trials (RCTs) screening with long-term follow-up the magnitude of overdiagnosis can be quantified. However, the magnitude of overdiagnosis in absolute numbers are small and therefore even minor biases in the RCTs can lead to under- or overestimation of the degree of overdiagnosis. Moreover, in cohort studies we can find indications of overdiagnosis with relation to stage-shift, size shift, incidence, and mortality rates. Finally, we can conduct research about the consequences of overdiagnosis in at least eight different areas: financial strain, hassles/inconveniences, medical costs, op-por-tu-nity costs, physical harms, psy-cholo-gi-cal harms, societal costs and work-related costs.

Furthermore through qualitative studies, we can explore the experiences and thoughts of individuals who have a high probability of being overdiagnosed. Longitudinal surveys using questionnaire with high content validity and adequate psychometric properties can be used to estimate the degree and length of psychosocial consequences associated with overdiagnosis.

Content
In this symposium different research projects using different studies designs will be presented. The different methodological approaches of how to conduct research on overdiagnosis in cancer screening will be discussed both in small groups and in plenum. Finally, we will brainstorm future opportunities and needs in overdiagnosis research.

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S13 Caught in bureaucratisation? Different disciplinary approaches to symptom negotiations in Northern GP-clinical practice

Mette Bech Risør¹, Rikke Sand, associate professor Andersen², May-Lill, associate professor Johansen³, Carl-Edvard, professor Rudebeck⁴, Deborah, clinical reader, deputy directo Swinglehurst⁵
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Background
The aim of this symposium is to reflect on and present research on three interrelated subjects: 1) What is a symptom? 2) How do contemporary orientations to medical thinking and practice change what are considered symptoms? 3) What are the implications of general practice and the increasing bureaucratisation that we currently see unfolding in Northern GP-settings?

1) What is considered a symptom is an index of a bodily sensations, linked at the intersubjective level to different motivations, intentions and culturally meaningful articulations. Studies on e.g. cancer consultations and functional disorders show how the perception of complaints, the mode of presentation, and the doctor-patient relationship frame what is understood as a symptom. Symptoms refer to more than subjective manifestations when negotiating an illness condition. 2) What is considered a symptom is further tied up with contemporary medical thinking and practice. Departing from reflections on contemporary forms of disease sensibilisation - which we define as a form of embodied subjunctivity, the ever experienced potential of almost any bodily sensation to signal disease - we suggest that it is increasingly difficult to distinguish between 'the normal and the pathological'. Never have physicians been able to prevent disease more effectively than now, however, this has expanded what we consider as 'signs or symptoms of disease'. Consequently, we see an increase in challenges to clinical practice as well as to the public, deciding on how to form the first line of care and when to seek care. 3) In this setting, GPs feel still more constrained by regulations and bureaucratic oversight. Often this results in a rushed, fragmented and technology-dependent form of clinical practice which leaves little room for clinical reflection and time to manage increasing expectations from the public.

Content
The symposium will consist of presentations that address the above from different disciplinary approaches with an emphasis on exploring processes of sensibilisation in the context of bureaucratisation.

Main message from speakers/presenters:
- May-Lill Johansen: How can GPs frame their consultations in a way that helps patients express their concerns?
- Carl-Edvard Rudebeck: Through the clinical dialogue, patient and GP may create a shared version of the patient's experience that also may be the cure of sensibilisation. Deborah Swinglehurst: A 'dilemma of attention': patients, technologies and the bureaucratisation of care

S14 Research on accreditation in Danish general practice: Planned studies and early findings

Anna Mygind1, Flemming Bro1, Pia Pinholt Munksgaard1, Marius Brostrøm Kousgaard2, Thorkil Thorsen2, Tina Drud Due2, Merethe Kousgaard Andersen3, Line Bjørnskov Pedersen3, Frans Boch Waldoff3
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3University of Southern Denmark, Odense, Denmark

Background
Accreditation is a widely used tool for quality development in healthcare systems. Research on implementation and effects of accreditation is rare, particularly regarding accreditation in general practice. Accreditation in general practice in Denmark was introduced in 2015 with the first practices undergoing accreditation in 2016. It is rolled out in a step-wise process to all general practices in Denmark during a three year period. A research project will evaluate the implementation and effects of accreditation. The purpose of the symposium is to share and discuss our preliminary findings and planned studies.

Content
Research on the following themes related to the Danish general practice accreditation programme will be presented:
1) Attitudes towards accreditation among GPs and the effect of accreditation on GPs’ intrinsic motivation, 2) Implementation support offered to and utilized by GPs and staff, 3) Implementation processes within general practices, and 4) Clinical and self-perceived effects of accreditation. The presentation includes final as well as preliminary findings from several related sub-studies using multiple research methods. Panel debates will focus on lessons learned in the first years of implementation of the accreditation programme.

Method
The symposium consists of presentations from researchers. Participants will be invited to discuss the findings and lessons learned regarding the concept of accreditation as well as the implications of these findings for future quality improvement efforts in general practice.

The symposium brings in an overall research-based perspective on Danish general practice accreditation, thereby supplementing the presentations „A workshop around future steps in the process for developing quality service in the General Practitioners field, based on accreditation experiences from Denmark” and „Accreditation in Danish general practice: Findings at survey and outcome after an opportunity to improve“. Keywords: Accreditation, Clinical Effects, Implementation, Motivation, Quality Improvement
S15 The non-linear relationship between evidence and practice - with homebirth as an emotionally charged case

Ole Olsen\(^1\), Katja Schrader\(^2\), Kirsten Lykke Nielsen\(^3\), Stefn Hjörleifsson\(^4\)

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**Background**

The route from scientific, general and objective EBM-knowledge to the messy realities of psychology, politics, culture and subjectivity needs to be further explored to ensure that EBM really benefits society as much as possible. In this session we explore the process as it is seen from the researchers’ desk, how it is experienced among clinically active GPs - from the youngest in training to the most experienced – supplied with input from a content area specialist and a philosophically oriented GP. We take information about home births as case, because the amount of evidence has developed dramatically over the last ten years, many GPs have strong opinions, and many GPs find the evidence counterintuitive; many face emotional challenges when they consider whether to change information practice at pregnancy visits to be in accordance with the new evidence.

**Content + Method**

We plan a series of short (5-7 min) presentations that will mutually illustrate and elucidate the issues from different angles, each presentation followed by involvement of the audience (3 minute discussion with neighbour followed by one or two comments in plenum). All presentations are then put into perspective and the floor is opened for a general discussion of the issues presented. Finally the organizers will try to sum up the most important comments.

**Short presentations:**

Ole Olsen, DK, statistician, M.Sc.: Place of birth - the evidence
Kirsten Lykke, DK GP, ph.d.: Why I changed my view of home birth - it was NOT the evidence!
Ole Olsen, DK, senior researcher: Place of birth - reactions among GPs, GPs in training and medical students
Katja Schrader, DK, midwife, ph.d.: Doctors’ and midwives’ different positions on home birth – reflections on the influence of experiences, beliefs and values
Stefn Hjörleifsson, N, GP, Dr med, BA in philosophy: The non-linear relationship between evidence and practice.

General discussion of the issues presented.

Organizers sum up most important comments.

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S16 A study about screening of Type 2 diabetes and subsequently intensive treatment in a primary care setting.

Anneli Sandbæk, Morten Charles

Research Unit of General Practice & Section for General Practice, Aarhus, Denmark

**Background**

Achieving equitable, safe, effective and high-quality care for patients with type 2 diabetes is no small task. It requires a coordinated interaction between patients, healthcare providers and the healthcare system, and a continuing focus at quality in care of diabetes and areas to be developed. Results and findings from research projects in diabetes are important to get published and implemented in daily practice.

It is known that intensive treatment of multiple cardiovascular risk factors can halve mortality and reduce microvascular complications among people with established type 2 diabetes. The ADDITION Europe study was established in 2001 with the aim to investigate if early identification of Type 2 diabetes followed by multifactorial treatment had effect at cardiovascular outcomes. Results from the five year follow up of the ADDITION-Europe randomized study showed that an intervention to promote early intensive management of patients with type 2 diabetes was associated with a small, non-significant reduction in the incidence of cardiovascular events and death.

The mortality experience was however similar to that reported for people of the same age without diabetes in the general population in Denmark. We have moreover demonstrated a reduction, however non-significant, in incidence of microvascular events in the intensive treated group without increased burden measured by a number of Patient Reported Outcomes Measures (PROM). In Denmark a large population (\(\approx 160,000\)) was offered screening for diabetes between 2001 – 2006 with identified groups of persons with diabetes, high risk of diabetes, high risk of cardiovascular death.

**The aim** of this symposium is to present results and experiences from the ADDITION study in a primary health perspective.

**Content**

In this symposia we will present results on cardiovascular events and overall mortality from the recently completed 10 year follow up of the ADDITION Europe study. We will discuss the benefits of screening for type 2 diabetes at a general population level and in the population identified with diabetes. Moreover we will present findings related to the challenges in having equality in health across sociodemographic groups. These findings will be put in perspectives in relation to the role of the General Practitioner and Primary Care in prevention and treatment of Type
2 diabetes.

Method
The symposium will be composed by short speeches spiced with activating spots and time for discussion the implication of the findings from the ADDITION study.

W01 The art of referring

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3The arctic university of Norway, Tromso, Norway
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Background
In health systems with GPs as gatekeepers for patients to specialized health care, the role of the GP is challenging. The quality of the referral is important to ensure timely and equal access for the patients. The referral decision must balance the medical needs, non-medical expectations and limited resources. GPs’ referral rates vary extensively, and the individual communication skills in handling patients’ requests can explain some of these variations. Hospital consultants frequently consider referrals as inappropriate or unnecessary, due to limited shared understanding of patients’ needs. Referrals do not always offer sufficient information, complicating priority decisions solely based on the referral. Some studies indicate that higher quality for exchanged information between GPs and specialized care may improve patient outcomes. Improved referrals, enhanced dialogue between GPs and specialized care and safe and effective patient-handovers may improve coordination and continuity of care.

Content
GPs express a dual responsibility towards both patients and national health system’s resources. There is a delicate balance between addressing patient’s expectations to be referred and making appropriate referral decisions, thereby accommodating hospitals’ expectations not to receive referrals perceived as unnecessary. Hospital consultants emphasize precise information as essential for giving reasonable and fair priorities to patients. Access to specialized care depends on many system factors, as patients’ rights and financing systems. Shared understanding of care processes and mutual trust and respect are important factors in handover communication.

Main message
Efforts to improve communication between GPs, patients and hospital colleagues are important to ensure higher quality health care. Electronic decision support may make this referral process more standardized and predictable for all parts. Dialogue between GPs and hospital specialists enhanced by electronic tools and professional meetings are largely unexploited adjuncts in supporting the quality of gate-keeping. Educating and training GPs in professional competence and decision making as well as communication training for GPs and hospital specialists may be associated with higher a quality of the referral process and lower overall health care costs.

Questions to be discussed
- How can GPs and hospital specialists initiate a mutual effort to improve the referral process?
- How can GPs be trained to be adequately resilient, addressing uncertainty more professionally?
- How can e-health solutions and other framework measures improve the quality of referrals?
- What are the most promising initiatives for policy makers to invest in?

W02 Treatment and prevention of type 2 diabetes among Middle-East immigrants

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2Lund University, Malmö, Sweden

Objectives
Treatment of immigrant patients with diabetes or with a high risk of developing diabetes could be a challenge in primary care. There is both scientific evidence from research as well as practical knowledge from everyday practice in primary care. We aim at get a discussion among the attendants to increase knowledge and possibilities in the area.

Background and Session content
Prevalence of diabetes and prediabetes, including impaired fasting glucose, is higher among some immigrant groups in the Nordic countries, and metabolic control in some groups among patients with manifest diabetes also worse, compared to indigenous populations. This is true especially for immigrants from the Middle-East region, amounting to up to 25% of foreign-born individuals in Sweden. The task for primary care is both to identify groups and individuals with an increased risk of diabetes, to diagnose diabetes and treat patients, and to prevent diabetes development, as good as possible according to guidelines. It is possible to identify both barriers and facilitators to an
effective diabetes treatment, as well as prevention of the disease. Efficacy of lifestyle interventions among ethnic groups might differ from native populations, considering cultural differences. Effects of a culturally adapted lifestyle intervention in changing dietary intake particularly energy, fat and fiber intake in Iraqi immigrants will be presented and discussed. Lifestyle interventions among Middle-Eastern immigrants should address the large proportion of energy obtained from fats in this high-risk immigrant group for type 2 diabetes. These topics will be discussed starting with knowledge from earlier research and background, and also with regard to ongoing studies in the field, and we will also be able to present results from new studies. Even if focus in on diabetes among Middle-Eastern immigrants this is of relevance for other non-European, non-Western immigrant groups. The intention to stimulate discussion among the attendants to the workshop, and we will summarize the discussion.

W03 Overdiagnosis & Cancer Screening: Challenges posed by Birds, Rabbits, and Turtles - a Clinical Workshop

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²Centre of Research & Education in G.P.; Prim. H.C. Research Unit, Region Zealand, Copenhagen, Denmark

The pathologic diagnosis of „cancer“ encompasses a wide variety of growth dynamics. Some cancers are rapidly progressive (the birds), some progress more slowly (the rabbits) and others grow so slowly that they would otherwise never bother people during their lifetime – or don’t grow at all (the turtles). This heterogeneity poses tremendous challenges for early detection efforts. The birds are the most aggressive cancers – the cancers that have already spread by the time they are detectable. Screening can’t help with the birds; the birds are already gone. The rabbits are growing more slowly; they are the cancers that may be helped by earlier detection and treatment. The turtles don’t need to be found, because these cancers aren’t going anywhere. Unfortunately, screening is really good at finding turtles. This heterogeneity also makes screening very counterintuitive. You might think screening can only lower your risk of getting cancer, but it turns out that it can be the fastest way to get cancer. You might think that all the „cancer survivors“ in the news (and, perhaps, in your neighborhood) – those individuals whose cancers were found early by screening and who are now doing well – provide powerful evidence that screening helps save lives. But it turns out that these survivors are often less likely to be evidence of screenings benefit – more likely to be evidence of its harms.

In this workshop, participants will consider their own cancer patients to provide stories of birds, rabbits, and turtles. Participants will also be encouraged to share their experience with misleading survival statistics and survivor stories – and the resulting influence on their patients. The workshop will conclude by exploring two additional complexities:

1.) Why screening-mediated decline in cancer mortality may not „save lives“ (i.e. may not imply a decline in all-cause mortality) and
2.) Why a 4th animal may need to be added to the analogy: the dodo.

Objectives
1. Recognize the heterogeneity within the pathologic diagnosis of „cancer“ and the resulting implications for the natural history of the disease.
2. Identify those cancers in which the efforts to detect the disease early and the existence of a disease reservoir have combined to produce overdiagnosis (i.e. cancers of the breast, prostate, thyroid and kidney as well as melanoma).
3. Anticipate the range of misleading feedback associated with screening: more cancer cases (perhaps even labelled as an epidemic), more „favourable“ stage distribution, higher 5 and/or 10-year survival rates, and more „survivors“ who feel they owe their lives to the test.
4. Explain why „saving lives“ may be misleading language and recognize that some cancers may regress.

W04 E-research: Changes and challenges in the use of digital tools in primary care research.

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²Research Unit of General Practice, University of Southern Denmark, Odense, Denmark
³, Norway

Objectives
This workshop aims to present examples of digital tools and technology that can improve the quality of clinical research. The presenters and participants will discuss both possibilities and pitfalls.

Background
Electronic surveys and other digital tools can ease data collection in primary care research. Examples of this are online randomisation, electronic questionnaires, automatic email scheduling, mobile phone applications and data
extraction tools. The amount of data can be increased to a low cost, and this can help to reach adequate sample sizes. However, there are still challenges within the field. To secure a high response rate, you need to follow up manually or use another application. There are also practical and ethical problems, and the data security for sensitive data should be followed carefully.

Session content
Oral presentations about some technological possibilities facilitating clinical research. Discussion in groups and summary in plenum.

W05 Publishing Your Work in Peer-Reviewed Journals
Victoria Neale
Wayne State University, Detroit, USA

Objective:
To prepare authors to submit reports of research studies to peer-reviewed primary care journals.

Background and Session Content:
Workshop content will include: 1) detailed suggestions for manuscript components following the IMRAD format (Introduction, Methods, Results and Discussion; 2) an introduction to current standards for the conduct, reporting, editing and publication of scholarly work in medical journals; 3) discussion of authorship criteria and other aspects of publication ethics; and 4) Responding to peer reviewer critiques.

Questions and Themes:
The workshop will use an interactive format, encouraging questions and audience participation. Participants will learn about editors’ expectations for papers submitted for peer review, and how to increase the probability that a manuscript is accepted for publication.

W06 Medical practice and its relation to existential and religious dimensions
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2Arctic University of Norway, Norway
3Uppsala University, Sweden
4Umeå University, Sweden
5University of Southern Denmark, Denmark

Objective
To discuss and share experiences of existential and religious dimensions in relation to health in order to promote partnership and attachment with our patients in primary care.

Background
There is a close connection between religious practices, conceptions of health and practices of healing as the history of religion and history of medicine demonstrate. To our knowledge, no society or major outlook of life fail to incorporate health beliefs and healing practices, modern Western philosophy and science being no exception. However, awareness of religious and existential dimensions is sparsely reflected in current medical practice, where our present beliefs are formed mainly by natural and psychological sciences. Could it lead to health gains if we as GPs accept that there is a common human need to feel „at home” in existential and religious matters and can we by being attentive to such issues in the consultation achieve more sustainable health gains? Religion in this context will be seen as a broad concept shaped by the many different cultures where our patients feel at home.

Session content
We will present the preliminary results from a waiting room enquiry exploring the ways our patients use to create meaning in their existence. How do patients in primary health care think about such issues? We will also discuss if such matters can at all be measured.

In Denmark, it is recommended that GPs integrate the existential dimension in patient care. However, research shows that this is not easily achieved and findings point to substantial GP-perceived barriers. How do we qualify general practitioners’ existential communication with their patients? Results from a Danish quality improvement project aiming at developing and evaluating a communication course and dialogue tool will be presented. We want to discuss these findings with our Nordic colleagues. Is there a need for communication training for GPs in the existential aspect of the consultation?

Problems in health care, such as overdiagnosis and overtreatment also have an existential dimension. We will discuss whether or not modern medicine can provide people with an existential basic security and confidence? With sami spirituality we will illustrate our common belonging to nature and the obligation of „care for mother earth”. Finally and mainly, the workshop will discuss the relevance of existential and religious dimensions in medical practice and methods to raise such issues in GP consultations.
The workshop will be interactive with room for discussion throughout the entire program. Case vignettes will be presented and discussed.

W07 Point-of-care ultrasound in general practice. How do I get started?

Troels Mengel-Jørgensen
GP, Chairman of DSAM Ultrasound Group, Hjørring, Denmark

Objectives:
1. What can point-of-care ultrasound (POCUS) be used for in general practice? 2. What equipment and training is needed to get started? 3. How is POCUS education organized in the Nordic countries. 4. Demonstration of simple easy-to-use scans, e.g. scan for abdominal aorta aneurism. 5. Reflections on „do’s and don’ts“ in point-of-care-ultrasound (appropriate and non-appropriate use of POCUS).

Background:
Point-of-care ultrasound is increasingly being used in general practice to improve diagnosis and guide interventions e.g. intra-articular injections and vascular access. As technology improves and equipment becomes more affordable, a growing number of general practitioners (GPs) acquire ultrasound devices. However, point-of-care ultrasound is highly user dependent and appropriate use requires proper training. Furthermore, GPs performing point-of-care ultrasound need to be able to deal with inconclusive scans or incidental findings of uncertain importance. Hence, it is important that guidelines and optimal educational resources are available in order to enable appropriate implementation of point-of-care ultrasound in general practice.

Session Content:
The workshop will consist of the following presentations:
What can I scan? What do I need to get started? – devices and training.
Education in POCUS in the Nordic countries - educational programmes in Denmark, Norway and Sweden.
After the presentations, there will be a live demonstration of how to make simple easy-to-use scans, e.g. scan for abdominal aorta aneurism.
Finally, a plenary discussion regarding the appropriate use - „do’s and don’ts“ - of point-of-care ultrasound will end the session.

Other considerations:
30-40 participants (depending on facilities for small group work including access to scanners which we expect to borrow). Expected time of session: 90 min

Reference
Variation in the use of point-of-care ultrasound in general practice in various European countries. Results of a survey among experts
http://www.tandfonline.com/author/Mengel-J%C3%B8rgensen%2C+Troels
http://www.tandfonline.com/author/Jensen%2C+Martin+Bach
European Journal of General Practice, Published online: 03 Aug 2016
http://www.tandfonline.com/doi/full/10.1080/13814788.2016.1211105

W08 The consultation kit: Five cards

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⁷Billingens värdecnt, Skövde, Sweden
⁸Public health and community medicine, Gothenburg, Sweden
⁹Hässelby Värdecnt, Stockholm, Sweden
¹⁰General Practice, Århus, Denmark
¹¹Lægehus, Silkeborg, Denmark
¹²General practice, Hvidovre, Denmark

Objectives
In this workshop we want share our experiences of an easy way to identify, train and teach the essential dimensions of patient/person-centred care. The aim is to get hold of the patients’ whole agenda in consultations. Although this
point is logical and self-evident doctors have great difficulties to act patient-centred.

**Background**

On the Kalymnos courses we have developed and tested a consultation kit. The consultation is divided into three parts: the Patient’s, the Doctor’s and the Shared part. **The Five cards** are used for the Patient’s part. While letting the patient tell his narrative, you will have to use two cards:

- **The receipt card.** When you give this card the patient will feel listened to, accepted and stimulated to go on. The receipt card relieves tension both in the patient and in you.
- **Summary card.** When you summarize what the patient has told you, he will listen to you. That gives you the opportunity to control the conversation and play one of the following cards.

The patient has got three ‘thought’ cards, all preferably to be initiated by a receipt card:

- **The idea card.** What has the patient had on his mind?
- **The concern card.** Normally the concerns urge the patient to make the appointment.
- **The expectation card.** This card will clarify what you have to do in the consultation.

**Session content**

After a short presentation of the five cards you will have the chance to test the cards in small groups under guidance of the above-mentioned experienced teachers. Afterwards we will discuss the method and results.

Our experience is that patients who attend a doctor using the consultation kit 5 cards will assess the consultation afterwards as good.

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**W09 Relationship centered general practice - involving both patient and doctor in the clinical dialogue**

Carl Edvard Rudebeck¹, Helena Bräckström², Maria Yngvesson³, Henrik Nelson⁴, Viktor Skobe⁵

¹Tromsø university, Västervik, Sweden
²Hälsocentralen Stora Trädgårds gatan, Västervik, Sweden
³Hälsocentralen Stensö, Kalmar, Sweden
⁴Hälsocentralen Kvarnholmen, Kalmar, Sweden
⁵Hälsocentralen Slotsfjärden, Kalmar, Sweden

**Objectives**

Proposing that the doctor-patient relationship is the working agent in clinical practice

Illustrating how this happens through the involvement and spontaneity of both parties in the interaction, and how the GP can encourage this to happen

Addressing the importance of the GP’s self-awareness for her or him to balance, in the interest of the patient, involvement and detachment throughout the interaction

**Background**

Patient-centeredness provides a structure for the consultation that counteracts the non-reflected dominance of biomedicine in the doctor-patient interaction, but the method does not tell about the dialogue as such. The Kagan-Wretmark (1979) response model distinguishes four dimensions of conversational responses; listening/not listening, explorative/non explorative, affective/cognitive and frank/glossing over, and includes also a few concrete advices that help the doctor stay open and receptive. Integrated into the clinical repertoire through training and supervision, the response model helps the doctor guide the conversation on to a level where it finds its own dynamics, involving both patient and doctor in spontaneous interaction. Here, the doctor’s spontaneity is the realization of the involvement in the patient’s predicament. The danger of spontaneity is its being taken over by the doctor’s self-interest. The doctor needs an active self-awareness to prevent this from happening. Detachment is also necessary for the doctor to take responsibility and pursue the tasks of the consultation in a structured way. Involvement and detachment go together (McWhinney 2000).

The authors have developed and practiced a course concept aiming at GP trainees and GPs, where the response model is built into a GP context. To obtain authenticity and responsibility, the participants bring their own problems as GPs/trainees to be the matter of the training dialogues. We want to share our experiences with Nordic colleagues, also inviting to a broader discussion about education initiatives in the area.

**Session contents**

Presentation of the response model mainly by illustrating it by video-recorded interaction

Practicing the response model over a non-sensitive theme in groups of three and discussing the experience within the group

General discussion about the response model

Brainstorming – What do we as educators do, and what could we do, to help medical students, trainees, and GP specialists balance involvement and detachment within the relationship with the patient?

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**W10 Guidelines - improving practice or hiding medical uncertainty?**
Objectives
The aim of the workshop is to explore the challenges modern guidelines pose to general practice and the measures that can be taken to meet these challenges. Is the guidelines of today clinically naïve protocols failing to take account of reality? How can we reach sound and realistic guidelines that facilitate informed decisions for us, and for our patients?

Background
Keeping up to date with available evidence is a utopian task for many GPs. The overwhelming output of scientific literature and the medical width of our field entail a reliance on guidelines to treat our patients according to best available evidence. However, guideline-driven medicine has been accused of imposing serious harm by exacerbating medicalisation, contributing to an epidemic of multimorbidity and counteracting a holistic approach towards our patients.

If guidelines would be followed literally, the majority of the population would be labelled with conditions, diseases and risk factors, and judged to be in need of medical attention. The displacement effects for general practice would be enormous. Additionally, guidelines are often based on evidence derived from patients both healthier and younger than the patients that we meet at the office. But the uncertainty related to extrapolating evidence is seldom made explicit and information about methodological flaws of the included studies is often not readily accessible.

Furthermore, vested interests in evidence generation, as well as in guideline panels, have been a serious problem. Even if measures are taken to manage this, intellectual conflicts of interests are still anticipated and a general perspective is often lacking.

Session content
Challenges associated with guidelines and guideline-driven medicine will be presented and measures taken internationally to meet these challenges will be introduced. Workshop participants will, in smaller groups as well as collectively, get to elaborate on how to reach sound and realistic guidelines that facilitate informed choices for us, and for our patients.

W11 Quality Improvement in the Nordic Countries - Cases from Denmark, Norway, and Sweden
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2Audit Project Odense (APO), Odense, Denmark
3The Standing Committee for Quality and Patient Safety, Stockholm, Sweden
4Centre for Quality Improvement in Medical Practices, Bergen, Norway

Keywords
Quality improvement, audits, quality circles, peer small groups, indicators.

Objectives
The aims of this 90 minutes workshop are to provide participants with knowledge about and to demonstrate the feasibility of concurrent state-of-the-art tools and methods for quality improvement and patient safety in general practice in Denmark, Norway, and Sweden. Each participant will leave with an updated overview and roadmap of such. Furthermore, it is the ambition to motivate workshop attendees to take part in or even conduct a quality improvement project in their own practice. After the workshop, they would know whom to contact to take the next step from intention to implementation.

Background
Audit Project Odense has conducted audit-based quality improvement (QI) projects in Denmark and other countries for more than 25 years. The fundamental approach of all APO projects is that participants audit a current subject and subsequently meet other participants as well as experts in a course, including discussion of the audit findings. Some times it is followed by another audit. The Standing Committee for Quality and Patient Safety within the Swedish College of General Practice (SFAMO) supports QI by sharing e.g. useful quality indicators and the Quality House, which is a simple way to create a systematic approach to QI. Each year we gather GPs, nurses and physiotherapists from Primary Care in a one-day conference, where different practical QI projects are presented, so we can learn from each other. Centre for Quality Improvement in Medical Practices (SKIL) in Norway organises QI work through peer small group activities. Before meetings, participants complete an online course with updated clinical knowledge. A facilitator leads the group towards QI, rooted in the participant’s own practice. The response so far seems promising.

Session Content
At the beginning of the workshop, after welcoming and matching of expectations, the participants will be introduced to the APO concept and recently conducted projects, the SFAMQ Quality House, and the SKIL peer small group activities in the form of short presentations (40 minutes in total). In the second part of the workshop, we will break participants into groups and discuss how to use the tools and methods in their respective countries, settings, and practices (40 minutes in total). At the end, participants will give us feedback, evaluate, and suggest how to improve
the session (10 minutes in total).

W12 Quality improvement projects in daily clinical practice - new initiatives in the Nordic Countries

Lars Gehlert Johansen1, Marianne Rosendal2, Nicolas Øyane2, Ulrika Elmroth4
1Consultant to the Regional Council, Rødekro, Denmark
2Assistant professor, Syddansk Universitet, Odense, Denmark
3Head of department, Bergen, Norway
4Deputy chair, Stockholm, Sweden

Quality improvement projects in daily clinical practice – new initiatives in the Nordic Countries Workshop chairs: Marianne Rosendal (Denmark)

Presenters and mediators: Lars Gehlert Johansen (Denmark), Pia Terkildsen (Denmark), Nicolas Øyane (Norway), Ulrika Elmroth (Sweden), Wieland and Finland pending

Aim:
To provide the participants insight into how quality improvement projects in daily clinical practice are carried out in the Nordic Countries

Method:
Short oral presentations as an appetizer for semi-structured dialog between participants. Program: 00.00-00.05 Short introduction (MR) 00.05-00.30 Status* in the different Nordic countries (5 min for each country) Sweden, Norway, Finland, Iceland and Denmark 00.30-00.60 Group discussion** (All participants are allocated in multinational groups) 00.60-00.65 Break 00.65-00.75 Oral presentation/discussion of the group work *** (plenum) 00.75-00.85 Take home messages from participant (plenum) 00.85-00.90 Concluding remarks (MR) * Each speaker presents: how quality improvement projects in daily clinical practice are organized, volume/magnitude of projects, encountered incentives and barriers, how are projects evaluated and communicated to colleagues. Finally how the knowledge obtained is implemented. ** Participants will be asked to place themselves in groups across nationalities. Each group is headed by a mediator. The mediator makes sure that each group discusses: How to encourage and support quality improvement projects in daily clinical practice based on the following themes [will be refined]:
- National level: How is it organized?, how is it stimulated? How is it evaluated? How are the results communicated and implemented?
- Local clinical level: how is it organized, how is it stimulated and how are projects evaluated, how are the results communicated and implemented? *** The moderator makes sure that each group prepares a poster for plenum presentation with the following headings: This works in• Iceland: pending • Norway: Nicolas Øyanse • Sweden: Ulrika Elmroth • Finland: pending • Denmark: Lars G Johansen

W13 Promoting awareness of depression diagnosis in nursing homes; implementation research in the real world

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1Uni Research Health, Bergen, Norway, Bergen, Norway
2The Research Unit for General Practice, Department of Public Health, University, Odense, Denmark
3Research Unit for General Practice, Uni Research Health, Uni Research, Bergen, Norway

Objectives
To explore preconditions for implementation of a tool for depression screening in nursing homes

Background
Depression is prevalent among nursing home patients. Symptoms of dementia and depression may overlap, which makes diagnostic work-up challenging. Systematic depression diagnosis is seldom performed, and responsibility for treatment decisions is often ambiguous. Antidepressant drugs are prescribed to more than a third of nursing home patient in Norway, although the evidence of treatment effectiveness is limited in mild and moderate depression and depression in patients with dementia. Furthermore, antidepressants drugs increase the risk of falls, hip fracture, hyponatremia and death. The prevailing treatment of depression in nursing homes should therefore be reconsidered. To promote awareness of depression diagnosis in this context, we will introduce regular routines for depression screening by implementation of Cornell Scale for Depression in Dementia (CSDD). This tool has been validated for patients with and without cognitive impairment, demonstrating high intrarater reliability and fairly good validity among Norwegian nursing home patients.

The workshop will emphasize implementation research exemplified with plans and experiences from this particular project. We shall present basic principles and concepts from implementation research, challenges in depression diagnosis in nursing homes, implementation of CSDD as a screening tool and preliminary results about preconditions for implementation drawn from a focus group discussion. Participants in the workshop will be invited to discuss the presented project as well as their own ideas for implementation research on other interventions.

Session content
Implementation research (professor Kirsti Malterud, MD, PhD)
Depression in elderly patients, especially in the nursing home context (professor Frans B. Waldorff, MD, PhD)
Implementation of CSDD for depression screening in nursing homes (Senior researcher, general practitioner Kristina Riis Iden, MD, PhD)
Which factors are most important for implementation of an intervention in a primary health care setting? (Plenary or group discussion)
Preconditions for implementation of CSDD – preliminary results from the implementation study. (Senior researcher, general practitioner Aase Aamland, MD, PhD)

W14 Improving care of patients with severe mental illness to reduce their excess mortality. -Make a contribution to the development of a complex intervention

Annette Davidsen¹, Niels de Fine Olivarius¹, Stewart Mercer², Flemming Bro³, Marius Brostrøm Kousgaard⁴, Ann Dorrit Guassora①, Susanne Reventlow①

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²University of Glasgow, Glasgow, United Kingdom
³University of Aarhus, Aarhus, Denmark

Objectives:
The objective of this workshop is to initiate the development of an intervention to improve the treatment of comorbid physical conditions in people with severe mental illness. It is anticipated that the intervention is developed as a coordinated care plan with cross-sectorial collaboration. We invite clinicians and researchers to contribute to the preparation of the intervention through discussions of clinical aspects, patient involvement, communication and organisation.

Background:
People with severe mental illness (SMI) comprise about 2% of the Danish population and they die 10-20 years earlier than people without SMI. Most of this excess mortality stems from physical diseases, which are underdiagnosed and undertreated. These patients are treated across sector borders and coordinated care between general practice, municipalities and hospital psychiatry is considered imperative. Different initiatives using integrated care models designed outside general practice have been tested but with disappointing results and with difficulties in engaging both patients and general practice.
The planned study will develop an intervention consisting of a coordinated care plan supported by an integrated information and communication technology (ICT) care platform to target challenges with insufficient care in this vulnerable group, in particular underdiagnosis and undertreatment of comorbid physical conditions. The intervention will be developed by combining state-of-the-art evidence-based clinical, social and technological knowledge with the perspectives of all involved parties in a participatory co-design process. During this preparatory design phase barriers and facilitators for a successful coordinated care plan involving all stakeholders will be identified. Hereafter the intervention will be executed and rigorously tested in a randomised controlled trial.

Session content: Short presentations followed by interactive discussions with participants, both in small groups and in plenum.
The short introductory presentations will include: the problem of overmortality in patients with severe mental illness; the role of general practice for patients with severe mental illness; co-design and user involvement; patient perspectives and interaction with professionals; transsectorial collaboration, and organisational aspects. Participants will be asked to answer short questionnaires. The dialogue will be recorded and the content will contribute to development of the intervention.

W15 Diagnosis and treatment of patients with stress-related mental disorder in general practice in the Nordic countries. Discussion of cases.

Kristina Glise¹, Ingrid Jonsdottir¹, Lilian Wiegner¹, Ólafur Aevarsson²

¹Institute of Stress Medicine, Gothenburg, Sweden
²Ólafur Aevarsson, Island

Objectives:
The objective of this workshop is to discuss the challenge of diagnosis and treatment of patients seeking care for stress-related mental health problems.

Background:
General practice in the Nordic countries is facing a major challenges as patients with stress-related mental health problems are increasing in number. Numerous patients are seeking help in primary care for mental health symptoms due to long-term stress. The challenge of clinically assess these patients and setting diagnosis have been raised in several studies showing a large discrepancy in how patients are clinically assessed within and between the Nordic
Session content:
The workshop will aim to gather general practitioner from all the Nordic countries to discuss, by using cases, the challenge of clinically assess patients with stress-related exhaustion/burnout, the relation to symptoms of depression and anxiety and with related diagnosis such as CFS, fibromyalgia and adjustment disorder. Treatments aspects, prognosis, prevention and sick-leave issues will also be discussed.

W16 Child health checks - why do we do them?

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OBJECTIVES:
At the end of the workshop the delegates will:
Have knowledge of child development assessment practices in the Nordic countries and Scotland
Understand and be able to describe theoretical arguments for differing approaches to child health surveillance
Be able to describe the extent to which a range of developmental assessments do or do not meet international screening criteria
Be able to identify areas of practice that require further research

BACKGROUND
Programmes of preventive child health care vary enormously between countries and regions. National policies are not necessarily closely reflected in the preventive care that is delivered in all areas, but in general the national policy represents a minimum programme offered on a universal basis. Among high-income countries with state-funded health services, scheduled contacts for developmental assessment vary in number from three currently in Scotland to 14-18 in the Scandinavian countries between birth and age seven years. Some differences between countries reflect the organisation and funding of health care: for example whether the checks are carried out in general practice, by doctors in child health centres or by nurses. The wide international variation in child health surveillance policy indicates that the evidence base underlying these policies is generally weak.

SESSION CONTENT
In a 90 minute workshop, the programme would run as follows:
Introductory lecture giving a very brief overview of national variations in child development assessment policy, and delegates will be reminded of the WHO screening criteria (20 minutes)
Delegates will be divided into groups with representatives from at least three countries in each group. They will be asked to nominate a rapporteur and to describe the child health assessment programme in their own areas (20 minutes)
Plenary feedback session (10 minutes) during which a list of 10-15 assessments commonly carried out in more than one country will be created and projected onto a screen for later use by the groups
The groups will reconvene and will discuss the extent to which these 10-15 checks meet WHO screening criteria, and for those checks that do not meet the criteria, the reasons why they are carried out. (20 minutes)
Plenary feedback session during which participants will be encouraged to consider whether and how gaps in evidence for the checks might be obtained. (20 minutes)

W17 When should GPs participate in emergency teams, and what is their contribution?

Peder A. Halvorsen¹, Helen Brandstorp¹, Magnus Hjortdahl¹, David Hogg², Øivind Holte-Ambjørnsen¹, Sverre Rørtevåg¹
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Objectives:
Together with fellow GPs we want to explore aspects of GP participation in emergency teams. We present research on the GPs' key contributions, how decisions are made and how leadership is enacted. Our ambition is to strengthen the awareness of the GP’s role as an emergency team member.

Background:
In 2010 a Norwegian study found that GPs are alerted in less than half or pre-hospital emergency incidents. Furthermore, when alerted, the GPs choose to participate in less than half of the call-outs (Zakariassen & Hunskår 2010). White papers have called for increased GP participation in such incidents. Others, however, have questioned
the utility of GP participation and suggested that patients may be better served by emergency medical technicians alone (Kindt et al 2013). Consistent with this view Norwegian GPs have reported lack of experience with common emergency procedures (Wisborg & Brattebe 2001). However, recent focus group studies suggest that although their role may have changed, GPs still have an important role in the pre-hospital emergency incidents. (Hjortdahl et al 2014, 2016). For our workshop this will be the point of departure, as we share research and experiences relevant to the GP’s role as a team member. Based on a complete sample of emergency incidents in the island community Austevoll, Norway, Sverre Rørtveit was able to study the GP’s contribution in terms of practical skills and an overall ability to assess the seriousness of the situation. In the municipality of Alta, Norway, Helen Brandsæter explored leadership and learning processes in team training sessions based on simulated emergency incidents. The Isle of Arran on the West Coast of Scotland epitomizes many of the challenges and opportunities for integrated prehospital care, including the effective use of voluntary emergency teams. Arran Resilience was formed to bring the coastguard, mountain rescue, police, fire and ambulance together for joint exercises, aiming to improve communication and teamwork (Hogg 2015).

Session Content:
We will start with a short onsite survey regarding the GPs’ role in emergency incidents, confidence in emergency medicine procedures and whether the GP would participate in hypothetical emergency call outs. We proceed with four short presentations:- Triage during pre-hospital, emergencies - how do GPs decide? (Rørtveit)- Confidence in emergency medicine procedures among GPs (Holte-Ambjornsen)- Leadership in the course of pre-hospital emergencies - what does it look like? (Brandsæter)- Arran Resilience: Networking island emergency responders. (Hogg) The session ends with feedback from the onsite survey, comparison with a recent survey of 1000 Norwegian GPs and a general discussion (Hjortdahl & Halvorsen).

W18 An Ounce of Prevention is a Ton of Work: New Ways to Deliver Routine Care While Maintaining Relationships

John M. Wilkinson, MD, Bjoerg Thorsteinsdottir, MD, Jay D Mitchell, MD, Kristin S. Vickers Douglas, MD, Mark D. Williams, MD
Mayo Clinic, Rochester, Minnesota, USA

Objectives
Become familiar with practice innovations designed to deliver preventive services, and the limited evidence related to the traditional „annual exam“ Share examples of the many ways patients may express their needs when requesting a visit Be more responsive to patient preferences and be able to explain the evidence and intent behind new processes Understand other ways of maintaining and strengthening the doctor-patient relationship

Background:
Mayo Clinic in Rochester Minnesota, best known as a tertiary care center, also provides primary care to a local population of over 140,000 people. In recent years, we have strived to ensure that all interested patients are assigned a primary physician or advanced practice nurse, have timely access to care, and are up to date on needed preventive services. It is a significant challenge to balance demand for pre-scheduled appointments with the need to preserve access for acute visits. It is also difficult for our support staff, at the point of initial contact, to ascertain a patient’s true needs; the actual intent or agenda behind terms such as „annual exam“ or „routine check-up“ is highly variable. While we have developed systems to deliver preventive services at all visits, or even in the absence of a visit, we are still striving to better explain these changes to patients, to honor their preferences, and to strengthen the doctor-patient relationship.

Session Content
The presenters, all primary care physicians with leadership roles in developing guidelines and processes for the delivery of preventive services, will review the relevant evidence with particular emphasis on routine preventive visits. We will briefly describe several initiatives, including decision support systems embedded in our electronic medical record, which allow any team member, at any point of contact, to provide any indicated services, as well as data on the effectiveness of these systems changes. We will lead a discussion regarding the many ways in which patients may express their needs when requesting appointments. We hope that all participants will share ideas and experiences to help all team members, including support staff, to more clearly understand each patient’s agenda and expectations at the point of first contact. We will share strategies which are designed to be as responsive as possible to patient preferences, while also making them aware of alternative resources such non-visit care, e-visits, and care team RN visits, which may also meet their needs.

We will conclude with an interactive discussion sharing ideas for ways in which we can all better explain the evidence and intent behind these new processes, as we all as additional strategies for maintaining and strengthening the doctor-patient relationship.
W19 Workshop: Developing clinics in a new context in different Regions in Denmark

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Objective:
To examine different methods and discuss the result by comparing selected examples from different Danish Regions.

Background:
General practice in Denmark is undergoing great changes at present. It is essential that the clinics develop their management and organization in order to be able to handle new changes and new tasks. The North Denmark Region, Central Denmark Region and Region of Southern Denmark have during several years co-worked on creating methods for organizational development. Lately the Capital Region and Seeland Region has entered the field with a new attitude thereby challenging and inspiring the rest. At the workshop we will compare and contrast experiences. The aim of the workshop is to inspire development by presenting and discussing different methods for developing general practice within organization and management.

Organisation:
There will be examples from different Danish Regions. After a brief presentation of the projects we will discuss the Nordic experiences among the participants.
There will be projects from different Regions in Denmark representing both classic education in management and visits to the clinics by advisers, mediators and coaches.

Method:
After a brief introductions and inspiring report from the field by general practitioners trained as coaches mainly in Denmark we will split into groups for a short period to profit from the knowledge offered by colleges from all countries. We will then reassemble to conclude on the complete Nordic experiences.
The aim of the session will be to inspire and illuminate rather than teaching management. We will engage main actors in the process of developing General Practice in different Regions of Denmark.

W20 Overdiagnosis in General Practice: How can it be limited?

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Background
A position paper from the Nordic Federation of General Practitioners
Testing of asymptomatic individuals in order to „prevent disease” or identify „early diagnosis” is increasing in volume in general practice. The fear of hidden disease is flourishing among physicians, patients, politicians and health administrators. Privately run diagnostic and treatment services as well as private health insurance schemes are drivers of this trend.
Overdiagnosis is closely related to overmedicalization of the borders of normality and treatment of conditions that are harmless, self-healing or untreatable. Overdiagnosis is linked to the false conception that it is an error not to diagnose at the first modest symptom which could be seen to indicate serious disease, but which in most cases is innocent and transitory.
The first imperative of medicine is not to harm. Overdiagnosis is harmful both to public health and to the individual. Public health deteriorates when resources are shifted away from the patients with chronic diseases and the poor to the well and the rich. By doing so, we risk that healthy individuals are harmed by being overdiagnosed, overtreated thereby perceiving themself as sick.
In 2001 the Norwegian College of General Practice stated the principle of „giving the most to those who have the greatest needs”. This principle is just as important today. GPs must avoid diagnosis when there is none to be made. Treatment must be limited to cases where there is evidence that treatment will be effective. GPs must be guardians of a broad concept of normality.
With this background, the Norwegian College made a position paper on overdiagnosis and overtreatment, finalised and accepted in May 2016. Moreover, in August 2016, the leaders of the five Nordic GP colleges and unions and
their boards agreed to make this paper, with just a few minor changes, a common Nordic position paper on overdiagnosis.

Content
In this workshop we will shortly present the status of overdiagnosis in the five Nordic countries; where it „burns“ and what can be done. We then invite the participants in the workshop into a broad discussion of what we as GPs can do to limit the problems and consequences of overdiagnosis and what kind of research is needed for preventing overdiagnosis.

W21 Salutogenesis: From theory to General Practice.

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OBJECTIVES
This workshop will discuss and reflect on how the theory of salutogenesis can be used in practice in future Nordic general practice

BACKGROUND
Primary Health care has been on the agenda of WHO since the late 1970ies and also an action area of the Ottawa Charter on Health Promotion. However, the realization of these intentions have been slow. The Nordic Countries are facing a generation shift among general practitioners probably having a huge impact on the services. The Salutogenic Model has proved to be effective both in generating the population health potential and healthy learning also having a constructive impact on chronic conditions such as the NCDs. Therefore a systematic implementation of the salutogenic approach in General Practice could have a huge effect of both the structure and contents of future General Practice.

SESSION CONTENTS
First a short highlight of salutogenic research in the Nordic Countries and research on salutogenesis and primary care is presented (1). In addition the experience of salutogenic learning in practice will be presented (2). This introduction will serve as a basis for a discussion on how this can be translated into the practice of general practice. A few central questions on the implementation of salutogenesis in General Practice will be introduced to the audience in a World Café format where the participants will have an opportunity to reflect and address these question in small groups lead by the session co-chairs. The participants will circulate to be able to address all three themes. The conclusions will be summarized by the co-chairs in plenum and concluded by the chair.

Essential Literature:
(1) The Handbook of Salutogenesis ; http://www.springer.com/gb/book/9783319045993 (open access)
(2) The ETC Healthy Learning process: Https://www.etcsummerschool.files.wordpress.com (open access)

W22 The Copenhagen Primary Care Laboratory (CopLab) database. A primary care platform for answering important clinical questions

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Objectives
The CopLab Database is a resource for general practice research. We invite colleagues to contribute with ideas and possible collaboration

Background and Session content
Routinely ordered blood tests, electrocardiograms, echocardiographs, lung functions tests and home blood pressure measurements in general practice support GPs in diagnosing and treating their patients. These analyses also document important physiological and pathophysiological relations. There is a need for research to explore associations between these parameters, concurrent comorbidities, and future disease outcomes.

The Copenhagen General Practitioners’ Laboratory was the main laboratory serving GPs in the Copenhagen area, covering approximately 1.2 million inhabitants until 2016. Services included a broad range of biochemical analyses as well as several cardiac and lung function tests. The Copenhagen Primary Care Laboratory (CopLab) database contains all results from these analyses and examinations (e.g. 176 million blood test results and 1 million ECGs)
from 2000 to 2015 requested by GPs. These data can be merged at a person level with the extensive Danish health registers. The general type of research question that can be answered by the CopLab database is whether certain laboratory values are associated with an increased risk of certain future disease outcomes. However, the way the data are obtained, the dynamic background population, and the sheer amount of data call for a carefully considered analytical approach. The workshop will review the data and methodological issues behind the analysis of the CopLab database as well as give examples of its use to inspire peers for collaboration. Among these are
Changes in prescription practices for thyroid hormones (T4 and T3) given to hypothyroid patients according to levels of thyroid-stimulating hormone (TSH). The prevalence of over- and under-treatment – especially among older patients. The relationship between haemoglobin A1c and blood glucose in patients with varying degrees of anaemia and renal involvement. Can HbA1c be used as an indicator of glucose regulation for all patients? The effects of serum markers of nutrition during pregnancy on disease risk in the offspring. A contribution to childhood disease prevention

Themes
We will invite the participants to present their own ideas about how to use this vast primary care research resource to the benefit of patients. The CopLab Database can give answers to many important clinical questions, and we invite researchers to collaboration about answering these questions.

W23 How can we make clinical guidelines and quality indicators more useful?

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Objectives:
By sharing experiences increase our knowledge of how best to design local decision support and quality assurance tools

Background:
Decision support and quality monitoring are used in some form in most GP practices. In some practices, GPs have developed their own systems for decision support and improvement, but usually decision support and quality indicators are developed at regional or national level. For guidelines to be used and followed, and for quality indicators to be used and improvement work to be carried out, commitment from all GPs in a practice is necessary. It requires that the colleagues take the time to discuss new guidelines together, to follow up their results and to evaluate improvement efforts together. Region Jönköping in Sweden has since 10 years developed guidelines for common diseases in primary care. The guidelines also contain agreements with specialist care and other services who is responsible for what, and on referral and counter referral. Since about the same time quality data on a number of these diseases has been collected from all GP practices. The data is analysed and the results are reported back at an annual visit to each practice as support for quality improvement. All work is done by colleagues, i.e. GPs and nurses in primary care. Since a few years, a project aiming to create corresponding support for decision making and quality improvement at national level which has raised some fear among Swedish GPs that the guidelines and indicators will be used more for judgement or comparison than to help and support daily work. In the Netherlands, on the other hand, national guidelines have been developed and yearly updated by is the Dutch Public Medical Association on a national level. These guidelines are obvious to use for most Dutch GPs. What is it that makes GPs see guidelines as „their own”? Does it affect the use when quality improvement tools goes from local to national? How can the feeling that they are „ours” be maintained?

Session content:
Plenary: Tools for supporting decision making and quality improvement at various levels (local and national) are illustrated with examples from Sweden and the Netherlands by workshop leaders. Group discussions on participants’ experiences from their own practices on support for decision making and quality improvement. What is available? What is useful? Reports from groups. Plenary: What makes tools for supporting for decision making and quality improvement being used in practice? Introduction by workshop leaders Participants’ group work: How can decision-making/ data feed-back be more useful? What could we use in our practice? How can it be developed? Reports from groups

Summary and conclusions
W24 Benefits and harms of general health checks - lifelong learning in general practice: how to read and use scientific literature


The Research Unit for General Practice in Copenhagen, Copenhagen, Denmark

Take home message
After this workshop the participants will know the basics of how to read a systematic literature review and interpret a meta-analysis and be able to assess if:
• the research valid?
• what are the results?
• should we apply the research in our practice?

Background
GPs often experience difficulties in keeping up-to-date, and at times feel they reach the outer boundaries of their knowledge. The practice of medicine in which the busy physician finds, assesses, and implements methods of diagnosis and treatment on the basis of the best available current research, clinical expertise, and combines this with the needs and preferences of the patient, is termed evidence-based medicine. By learning and practising the principles of evidence-based medicine, GPs will have a tool to assist lifelong learning in practice. Based on the questions that arise in daily practice, we can learn by doing.

What are the benefits and harms of general health checks? This workshop will invite participants to read the Cochrane review about general health checks and scrutinise the paper using the method of critical appraisal.

Session content
The didactic method used in the workshop is mostly small group activities with eight participants and two tutors in each group. The participants will receive two scientific papers: the BMJ-version of the Cochrane review about general health checks and a paper about how to read a systematic review. Furthermore, a check list about which issues in the empirical paper to scrutinise will be distributed to the participants.

Flow of session:
Lecture: Welcome and how to work in small groups – 15 minutes (plenary room)
Small groups: critical assessment of the empirical paper – 60 minutes (smaller rooms)
Plenary: Summary and final discussion – 15 minutes (plenary room)

Other considerations
Minimum of 8 participants, up to 64 participants (Maximum number will depend on the number of rooms available for the workshop).

W25 Doctors as Activists

Alec Logan1, Khairat Habbal2, Chris Johnstone3, Steve McCabe4, James WILLIS5
1Logan Practice, Glasgow, Scotland
2Lebanese American University, Beirut, Lebanon
3Johnstone Practice, Paisley, Scotland
4Portree Medical Practice, Portree, Scotland
5Willis Practice retired, Alton, United Kingdom

Introduction
As family doctors we know that helping our patients takes us well beyond simple Cartesian fiddling. We need to step outwith our consulting rooms. To try to change things. To fight for our patients against insensitive and humiliating welfare schemes; housing, educational, transport issues. To engage politically. To enfranchise the disenfranchised. To collaborate and activate. Occasionally, to agitate.

How to do it?

Sections
Making a difference in your local community – Chris Johnstone
GPs work in the centre of their patients’ communities. They know their communities. GPs meet everyone. MPs, councillors, activists, shop-owners, volunteers and local workers etc. GPs are community assets. GPs should be social activists. For whole communities, not just individuals.

Trying to change national health policy – Steve McCabe
A historical tour from a Scottish perspective. Ways and means of doctors as social activists, transforming health and social care at a national level. Our forebears were often humble. We must inspire our next generation.

An international perspective – Khairat Al-Habbal
Lebanon! A million Syrian refugees, 450,000 Palestinian refugees, a dysfunctional parliament, no president for the republic since 2014, and only 120 practicing family physicians. A perfect setting for unlimited opportunities for social activism. I discuss my experience with the mobile clinic initiative to provide medical care for the Syrian refugee
children in the camps of the North. Then UNDP project promoting primary healthcare as the core of the social change.

**The Biggest Issue: a GP and Climate Change – James Willis**

Doctors have been strangely silent on greatest threat to health that humanity has ever faced. Climate change. Necessary international action still frustrated by wishful-thinking, ignorance and, above all, by organised denial. Our advanced civilisation assailed by perverse, populist assault on expertise, science and reason. Standing with one foot in science and the other in relationships of intimate, human trust, doctors are uniquely placed to remedy this situation by their words and by their example.

**Education, Education, Education: a syllabus – Alec Logan**

To reach my large teaching practice students have to drive past 8 fast food outlets. If after that they think that managing diabetes is just about tight control of HbA1c then I have not been teaching them properly. They need to learn about the doctor’s role as social activist. I now have a multidisciplinary educational team – doctors, public health specialists, social workers, housing officers and politicians.

**Discussion**

**W26 Helping high risk elderly patients avoid hospitalizations and readmissions through proactive multi-disciplinary care transitions and palliative focused home services.**

Björg Thorsteinsdottir, Gregory Hanson, John Wilkinson

*Mayo Clinic, Rochester, USA*

**Objectives**

This interactive workshop is designed to educate participants about the benefits of a proactive care transitions program for elderly patients after hospitalization to prevent readmissions and to share challenges and opportunities in developing a successful program. Participants will be able to:

- Describe the Mayo Clinic care transitions program and compare our outcomes with other successful programs in the literature
- Share examples of how this model is experienced by the patients and the health care team.
- Understand the new skills needed by health professionals in meeting the needs of a rapidly aging and highly comorbid population beyond the limits of the traditional health care setting.

**Background:**

Mayo Clinic in Rochester Minnesota is a tertiary care center but also provides primary care to a local population of 140,000 patients. The Mayo Clinic Care Transitions program started in 2011, targeting high risk elderly patients who had been hospitalized. The patients were identified through a locally developed automatic electronic risk calculator, the elder risk assessment score. The patients were enrolled prior to discharge and then followed by a multidisciplinary team consisting of physicians, nurse practitioners, nurses, social workers and pharmacists. The team visited patients at their homes within 1–5 business days following hospital discharge and performed a series of evaluations. These included medication reconciliation, home services evaluation, advanced directives discussion, action plan for acute and chronic disease, safety plan, and discussion of community resources. Further follow up was per telephone or home visits as needed. Our program has demonstrated significant reduction of 30 day readmissions 12.4% (95%CI8.9–15.7) versus 20.1%(95%CI15.8–24.1%), resulting in significant cost savings. Goals of care changed toward lower intensity for 37.5% patients with 42% of patients dying at home and only 15% in the hospital.

**Session Content**

We will review the literature on the different models of care transitions programs for high risk patients and how they compare or contrast with our program.

We will present data from our program showing its effect on patient important outcomes including readmissions, death, advance care planning, intensity of end of life care and cost.

We will share stories of how this model is experienced by both patients and the healthcare team.

The presenters will describe the new roles and skills which they have developed, through the design and implementation of our program.

Using a skilled moderator, we will focus our time depending on the needs and interests of the audience, while ensuring that all 3 objectives are addressed and that the ensuing discussion will enable all participants to learn from each other.

**W27 Physician heal thyself**

Helena Galina Nielsen¹, Elin Olaug Rosvold²

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**Objective:**
The aim of the workshop is to raise the awareness of how we as doctors take care for ourselves and address our own health and frailties in professional life.

**Background:**
Do you have your own doctor? Are you a doctor for your family? How do you experience to be a patient? In recent years, more focus has been addressed to the dilemma of doctors’ self-care and help seeking behaviour. Doctors lack training in how to access appropriate self-care and how to treat their peers. While a doctor–patient often expect to be treated like a ‘normal’ patient, yet the treating doctor often fails to satisfy this expectation.

**Content:**
Taking departure from our research projects and own experiences as doctor-patients, we will discuss and reflect on our dilemmas as helping professionals to raise the awareness about self-care as a part of professional development.

**Method:** Group work initiated by a short presentation

**Disclosure of Interest:** None Declared

**Keywords:** Self Care, doctor-patient relationship, professional development

Helena Galina Nielsen, Specialist in Family Medicine, Research Unit for General Practice, Copenhagen
Elin Olaug Rosvold, Professor, Department of General Practice, Institute of Health and Society, University of Oslo

**W28** The rising tide of multimorbidity - how general practice can lead the challenges of ‘meeting the need of the patient’ and ‘the needs of society’

Joachim Sturmberg
*The University of Newcastle, Newcastle, Australia*

**Objectives.**
This workshop aims to untangle some of the complexities behind the apparent „rising tide of multimorbidity”. Specifically the aims are to develop a common understanding about the nature of multimorbidity an approach to explore the multifaceted needs of our patients an approach to deliver person-centered and equitable care ways to respond to the needs of our society confronted with the rising burden of multimorbidity in a resource-limited environment a learning community focused on integrated multimorbidity care

**Background.**
Multimorbidity increases with aging and poor lifestyle choices in younger people – it has become an „all of society“ problem. Its consequences are most acutely seen in general practice. What are our obligations – as health professionals – to in tackle the societal problems of multimorbidity (as Rudolf Virchow did at the time of industrialisation), and how do we best respond to the challenges?


**Session outline – an Interactive Workshop**
Setting the scene – multimorbidity in a young adult, elderly person, and a person from a disadvantaged community.
Small group work I appreciating health – a person and a health professional perspective managing multimorbidity in light of the person’s health experience/expectations managing the effects of multimorbidity on families/relationships/communities
Small group work II adapting to the uncertainties of managing a person with multimorbidity
Small group work III creating a movement to achieve an integrated approach to multimorbidity management becoming an effective policy change agent - supporting person-centered equitable health systems

**W29** Getting more knowledge and awareness of alcohol abuse in elderly patients

Maike Christien Eppens¹, Marta Velgar²
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General practitioners think that alcohol abuse is less common in elderly people, however alcohol problems in elderly people are underestimated. In the Netherlands in 2008 71% of 65+ have been drinking more than one glass of alcohol (1.4 glas) a day and 8% more than three glasses a day. The amount of elderly patient with strong alcohol abuse changed from 3% to 5%. Elderly people are drinking more frequent and on daily bases compared to younger people. With the growing population of elderly people it is important to have more knowledge and awareness of the upcoming problems of alcohol abuse. Elderly patients do not talk about the subject. Mostly the family members are
reporting the problems of alcohol abuse. General practitioners have difficulties remarking the problems in elderly people. Why do we find it difficult to recognise the alcohol abuse? What kind of tools are there to remark the problem? Why is it so important to have knowledge about the drinking problems in elderly people? The session will start with group discussion about why it is so important to have knowledge of alcohol abuse in elderly people? In the next part there will be a few slides of introduction of the problem. At the end of this session we will discuss in groups the different way of screening elderly people. How and when do we ask patient about alcohol drinking. What kind of questions do we use to recognise the problem?

W30 High quality and safe care for patients in primary care

Martin Bruusgaard Harbitz¹, Gunnar Tschudi Bondevik², Jenny Bennison³, Helen Brandstorp¹
¹National center for rural health, University of Tromsø, Tromsø, Norway
²University of Bergen & National Centre for Emergency Primary Health Care, Bergen, Norway
³And Executive Officer (Quality) at RCGP Scotland, Edinburgh, United Kingdom

Objectives:
To share and discuss experiences and knowledge about patient related care and safety issues in primary care, in order to gain better understanding and embrace the potential of quality improvement work to bring about continuous improvement in patient outcomes and reduction in unwarranted variance.

Background:
The potential in primary care for adverse events and quality breaches is immense. Up to 90% of all patient care happens in primary health services, and it is from there that most complaints originate. Despite adverse events might be less serious in primary care, the large numbers of patients involved mean that the consequences are comparable with those of hospital-based adverse events. Involving patients in improving safety is a prioritized and potentially powerful strategy in high quality research and care. Measuring safety attitudes amongst health care providers in primary care may identify possible weaknesses in clinical settings, and motivate quality improvement interventions to reduce risk of adverse events.

MBH: What do patients regard as important safety topics?
JB: How can GP practices work together in clusters to improve patient outcomes?
GTB: How is safety culture in different services of primary care?
HB: Training interaction in primary care emergency settings is a requirement in Norway. How does such training relate to patient safety culture?

Session content:
MBH: Preliminary results from an interview study on patients reported patient safety in rural primary care.
JB: Early experience of quality clusters in Scottish general practice - using local experience and data to examine performance, at the same time as providing local learning, peer support and local solutions. Can this approach help to improve wellbeing and health, and reduce health inequalities?
GTB: The SIP-project: Safety culture in primary care. How can safety attitudes amongst health care providers in primary care be measured? How to make safety culture reports relevant for health services in the communities, in order to improve quality of care?
HB: Results regarding patient safety from a 3.5-year long action research study on systematic interprofessional team training in a rural municipality.

Conclusion:
By the end of this session, participants should be able to reflect on different safety perspectives in primary care.

Key words: Patient safety, team training, patient perspective, safety culture, quality, cluster working

W31 A demonstration how to manually examine a patient with arm-, shoulder- and neck- pain and a talk about the different reasons for these symptoms

Peter Silbye, Charlotte Vogelhofer
The Danish Society of Muskuloskeletal Medicine, Roskilde, Denmark

Background and Aim:
In General Practice we often see patients with problems from the musculoskeletal system, and we often lack the skills to examine these patients in the right way. In the Danish Society of Muskuloskeletal Medicine (DSMM) we educate doctors to master these skills. We have a number of courses in different manual treatments. DSMM is a society of 600 members who are mostly GP.

Method:
In this presentation we will demonstrate how to examine and evaluate a patient with neck- and shoulder-pain radiating to the arm. We have chosen this example, because some patients with pain radiating to the arm will incorrectly be referred to the hospital suspecting it to be a disc herniation. It will be a practical workshop with hands
on", where the participants will examine the colleagues after theoretical and practical instructions. We expect the participants to be dressed in clothes which makes it easy to examine the upper body.

**Results:**
We expect participants will achieve a knowledge and an interest in patients with problems in the musculoskeletal system and manually examine their own patients. We hope as well they will seek further education in this subject, as the workshop should be seen as an appetizer.

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**W32 Introducing a new continuing professional development programme, or how to go from 0 to 10.000 CPD training days in one year.**

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**Objectives:**
For colleges working with or interested in continuing professional development for GPs to acquire knowledge about and experience in developing new forms of CPD courses, with demand for a large volume developed over a short period of time.

**Background:**
The Danish Regions (responsible for the national health services including the provision of general practice) and the Association of General Practitioners in 2014 entered into an agreement that aligned the incentives to participate in CPD. The existing voluntary, individually based CPD programme in Denmark was extended with recommended and prioritized structured and systematic CPD activities. A multidimensional learning needs analysis in a DELPHI set up identified a consensus-based curriculum with a six education themes. A specific curriculum for each of the themes was developed. Next step was to translate the curricular into feasible and teachable CPD activities. The activities, which could be, scaled up to meet a nationwide high volume CPD recruitment.

**Contents:**
The participants will work with the implementation of a curriculum into a course, considering form, method, effectiveness and scale-up potential.